

Leh
Jm
26.12

BIBLIOGRAPHY
OF
SCIENTIFIC PUBLICATIONS
OF
SOUTH ASIA
(India, Burma, Ceylon)

NO. 8
July—December, 1952.



SOUTH ASIA SCIENCE CO-OPERATION OFFICE
C. S. I. R. BUILDING, OLD MILL ROAD,
NEW DELHI - 2. INDIA

1399
26/12/52
11/11/52

BIBLIOGRAPHY

OF

SCIENTIFIC PUBLICATIONS

OF

SOUTH ASIA

(India, Burma, Ceylon)



Site NO. 8

July—December, 1952.

Car



SOUTH ASIA SCIENCE CO-OPERATION OFFICE
C. S. I. R. BUILDING, OLD MILL ROAD,
NEW DELHI - 2. INDIA

CONTENTS

	Pages i
SUPPLEMENTARY LIST OF SCIENTIFIC PERIODICALS	
Bibliography of scientific publications	
	Entries
159.9 PSYCHOLOGY	(1-42) 1
31 STATISTICS	(43-52) 2
37 EDUCATION	(53-105) 3
389 STANDARDIZATION	(106-108) 5
39 ETHNOLOGY	(109-125) 5
5 NATURAL SCIENCES	(126-128) 6
51 MATHEMATICS	(129-266) 7
52 ASTRONOMY	(267-282) 13
53 PHYSICS	(283-414) 14
54 CHEMISTRY	(415-732) 21
548 CRYSTALLOGRAPHY	(733-740) 37
549 MINERALOGY	(741-747) 38
55 GEOLOGY. METEOROLOGY	(748-889) 38
56 PALAEONTOLOGY	(890-904) 45
57 BIOLOGY	(905-990) 46
58 BOTANY	(991-1194) 51
59 ZOOLOGY	(1195-1338) 61
61 MEDICAL SCIENCES	(1339-2078) 69
62 ENGINEERING	(2079-2357) 104
63 AGRICULTURE	(2358-2836) 117
66 CHEMICAL INDUSTRIES. CHEMICAL TECHNOLOGY	(2837-3047) 142
67/68 MANUFACTURE AND PROCESSING OF SIMPLE MATERIALS	(3048-3132) 152
69 BUILDING INDUSTRY	(3133) 156
73 NUMISMATICS. SCULPTURE	(3134) 156
77 PHOTOGRAPHY	(3135-3140) 156
91 GEOGRAPHY	(3141-3143) 157
5/6(091) HISTORY OF PURE & APPLIED SCIENCES	(3144-3146) 157

SUPPLEMENTARY LIST OF SCIENTIFIC PERIODICALS

New Periodicals

INDIA

1. *Agra Univ. J. Res. (Sci)*

Agra University Journal of Research (Science)
Biannual Rs. 15/- Inland. Rs. 20/- Foreign.
Registrar, Agra University, Agra.

6. *F. R. I. News*

Quarterly Bulletin of the Fuel Research Institute,
India.
Quarterly Rs. 4/-.
Fuel Research Institute, Jealgora, P. O. Manbhum,
Distt. Bihar.

2. *Bull. Dep. Anthropol.*

Bulletin of the Department of Anthropology.
np.
Director, Department of Anthropology,
Government of India, Calcutta.

7. *J. Anat. Soc. India*

Journal of the Anatomical Society of India
Biannual Rs. 18/-.
Department of Anatomy, Nilratan Sarkar Medical
College, 138, Lower Circular Road, Calcutta, 14.

3. *Bull. nat. Inst. Sci. India*

Bulletin of the National Institute of Sciences of India
Occasional. Various.
National Institute of Sciences of India, Mathura
Road, New Delhi.

8. *J. Madras Inst. Techn.*

Journal of the Madras Institute of Technology
Biannual Rs. 8/- 16 sh. 2/-
Madras Institute of Technology Chrompet. P. O.,
Madras State

4. *Clinic Soc. J. (Med. Coll., Lucknow)*

Clinical Society Journal.
Annual.
Clinical Society, Medical College, Lucknow.

9. *J. Univ. Poona*

Journal of the University of Poona.
np.
University of Poona, Poona.

5. *Everyday Sci.*

Everyday Science—Journal of the Northern India
Science Association.
Quarterly Rs. 5/- or 10 sh.
Hargolal Road, Ambala Cantt, E. Punjab.

6A. *Int. Comm. Irrig. Drain. Annu. Bull*

Annual Bulletin of the International Commission
on Irrigation and Drainage.
Annual.
Central Office, 1, Old Mill Road, New Delhi.

CEYLON

10. *Ceylon teacher*

Ceylon Teacher
Monthly Rs. 6/-.
The Journal Secretary, Ceylon Teacher 7, Albert
Place, Dehiwela (Ceylon)

11. *J. child. hosp.*

Journal of the Children's Hospital.
Dr. Stanley de Silva, Ladz Ridgeway Hospital,
Borella, Ceylon.

LIST OF SCIENTIFIC PUBLICATIONS

INDIA. BURMA. CEYLON

July—December 1952.

159.9 PSYCHOLOGY

cf. also 1745

1. BAGCHI, AMALENDU, Fundamentals of feelings and emotions in Indian psychology. *Indian J. Psych.* 27(I-IV) 97-108, 1952.

2. BAGCHI, A., Fundamentals of feelings and emotions in Indian psychology. *Indian J. Psych.* 27(I-IV) 91-95, 1952.

3. BERGLER, E., Incognito exhibitionism. *Samiksa* 6(3) 176-190, 1952.

4. BOSE, G., Pleasure in wish. *Samiksa* 6(2) 53-69, 1952.

5. BOSE, G., Sex and anxiety. *Samiksa* 6(3) 191-200, 1952.

6. BOSE, S. K., Some facts of psychoanalytic interest of Gandhiji's life. *Samiksa* 6(3) 163-175, 1952.

7. BOSE, S. K., A note on tension study in Calcutta industrial area. *Indian J. Psych.* 27(I-IV) 153-157, 1952.

8. CHATTERJI, N. N., Psychology of schizophrenia. *Indian J. Psych.* 27(I-IV) 57-66, 1952.

9. CHATTERJEE, NISITH RANJAN, Illusion of direction in apparent movement perception. *Indian J. Psych.* 27(I-IV) 143-147, 1952.

10. CAOWLEY RALPH M., Human reactions of analysts to patients. *Samiksa* 6(4) 212-219, 1952.

11. DAS GUPTA, J. C., The nature of tender impulses in orphans. *Indian J. Psych.* 27(I-IV) 45-55, 1952.

12. DAYAL, ISHWAR, Gestalt theory of personality. *Indian J. neur. & psych.* 3(4) 409-419, 1952.

13. DAYAL, ISHWAR, Some assumptions on the performance of the Rorschach in India. *Indian J. neur. & psych.* 3(3) 253-258, 1952.

14. GANGULY, M., Suggestions for experimental study of Indian music. *Indian J. Psych.* 27(I-IV) 127-130, 1952.

15. GHAMAT, MANI B. (Miss), Aggression and its relation to emotional development. *Indian J. neur. & psych.* 3(4) 399-408, 1952.

16. GHOSH, S. P., Selection tests for skilled and semi-skilled workers. *Indian J. Psych.* 27(I-IV) 149-152, 1952.

17. GLOVER, E., Psycho-analysis and child psychiatry. *Samiksa* 6(3) 141-162, 1952.

18. GOOD, M. G., A general theory of human behaviour. *Indian J. med. Sci.* 6(8) 544-556, 1952.

19. GUZE, HENRY, Some bodily and behavioral manifestations of the menstrual cycle. *Int. J. Sex.* 6(1) 1-14, 1952.

20. HAFEEZ, M. A., A study of Cattell's dispositions test and the relation between the disposition of curiosity and intelligence. *Indian J. Psych.* 27(I-IV) 67-77, 1952.

21. HAFEEZ, M. A., Emotional stability of college students. *J. Educ. & Psych.* 10(2) 87-94, 1952.

22. HARPER, R., Observations on the psychological study of craftsmanship. *J. Educ. & Psych.* 10(2) 67-75, 1952.

PSYCHOLOGY

23. INDIAN PSYCHO-ANALYTICAL SOCIETY, Annual Report for 1952. *Samiksa* 6(4) i-v, 1952.

24. JALOTA, S., Continuous vs. the spaced method of learning. *Indian J. Educ.* 14(4) 211-215, 1952.

25. KUPPUSWAMY, B., Measurement of social distance. *Indian J. Psych.* 27(I-IV) 39-43, 1952.

26. LALL, SOHAN, Personnel selection. *Def. Sci. J.* 2(2 & 3) 103-112, 1952.

27. MASSERMAN, JULES H., Experimental approaches to psychoanalytic concepts *Samiksa* 6 (4) 243-261, 1952.

28. NARAYAN, RAJ, How to achieve a unified psychology. *J. Educ. & Psych.* 10 (3) 128-132, 1952.

29. PODOLSKY, EDWARD, Psychic impotence. *Indian med. Rec.* 72 (7) 153-156, 1952.

30. PODOLSKY, EDWARD, Emotions and the brain. *Indian med. Rec.* 72 (12) 275-277, 1952.

31. PODOLSKY, EDWARD, The mind of the transvestite. *Int. J. Sex.* 6 (2) 107-108, 1952.

32. RAM, PARS, Human relations on the Indian scene. *Indian J. Psych.* 27 (I-IV) 1-25, 1952.

33. RAMANA, C. V., Observations on the analysis of a musician. *Samiksa* 6 (4) 229-242, 1952

34. SASTRY, N. S. N. & RAMACHANDRA RAO, S. K., Towards measuring social distances. *Indian J. Psych.* 27 (I-IV) 109-116, 1952.

35. SAXENA, M. S. L., A comparative study of personality adjustment and attitude towards marriage among college and university students. *Indian J. Psych.* 27 (I-IV) 117-126, 1952.

36. SEN, INDRA, The psychological system by Sri Aurobindo. *Indian J. Psych.* 27 (I-IV) 79-89, 1952.

37. SEN, K. R., Relationship between body and mind. *J. Sci. Club.* 6 (2) 64-71, 1952.

38. SEN, KRISHNA, Some Indian dream theories. (A study and comparison with Western views). *Indian J. Psych.* 27 (I-IV) 27-37, 1952.

39. SHANMUGAM, T. E., Characteristics of adolescent girl's fantasy. *J. Madras Univ.* 22B (1) 119-128, 1952.

40. TAUBER, EDWARD S., Observations on counter transference phenomena—The supervisor-therapist relationship. *Samiksa* 6 (4) 220-228, 1952.

41. THOMPSON, CLARA, Counter transference. *Samiksa* 6 (4) 205-211, 1952.

42. VARMA, M., Freud's instinct theory and the secedants—an attempt at rapprochement. *J. Educ. & Psych.* 10 (2) 76-81, 1952.

31 STATISTICS

ref. also 242

43. BANERJEE, SANTIMOY, Seasonal fluctuations in the working class cost of living index in Calcutta. *Calcutta statist. Ass. Bull.* 4 (15) 97-102, 1952.

44. BOSE, S. C., A demographic study of the Upper Damodar basin. *Indian geogr. J.* 27 (3 & 4) 56-63. 1952.

45. BOWMAN, J. B., The 1951 census of Bombay State. *J. anthrop. Soc. Bombay (N. S.)* 6 (2) 7-26, 1952.

46. CHAKRAVARTI, NISTARAN C., Co-ordination of official statistics. *Proc. 39th Indian Sci. Congr. Pt. IV*, 97, 1952.

STATISTICS

47. CHAND, MAHESH & BANERJI, ASOKE KUMAR
A statistical study of absenteeism in Indian labour.
Sankhya **12** (Pts. 1 & 2) 151-160, 1952.

48. MATHEN, K. K., NAG, A. G. & SHARMA, GULERI
J., Statistical methods in population studies. (discussion). Pts. 1-3. *Proc. 39th Indian Sci. Congr. Pt. IV*, 89-91, 1952.

49. PANDE, J. K., The problem of missing quotations. *Calcutta statist. Ass. Bull.* **4** (15) 110-116, 1952.

50. SENGUPTA, P. R., Placements effected by employment exchanges in India. *Calcutta statist. Ass. Bull.* **4** (15) 103-109, 1952.

51. SINHA, A. R., Co-ordination of official statistics. (discussion). *Proc. 39th Indian Sci. Congr. Pt. IV*, 91-94, 1952.

52. TELANG, M. A., Co-ordination of official statistics in Bombay State. *Proc. 39th Indian Sci. Congr. Pt. IV*, 94-97, 1952.

37 EDUCATION

cf. also 24

53. ACHARLU, K. S., Research in education. *Educ. Quart.* **4** (15) 162-167, 1952.

54. ANANTHAM, K. R. B., The pivotal problems of physical education. *Indian J. Educ.* **14** (4) 221-227, 1952.

55. BHATTACHARYA, B. C., Trends of higher technological education. *J. Ass. Prince. techn. Instn. India* **5** (2) 73-78, 1952.

56. CENTRAL BUREAU OF EDUCATION, GOVT. OF INDIA, Progress of education India—1937-1941. Decennial review, Vol. II, (for official use only). (Statistical tables). Publication No. 113, pp. 397. Publ: Manager of Publications, Civil Lines, Delhi.

57. DAS, S. K., GUPTA, SUNITA BALA (Miss), GHOSH, S. E. (Miss), SHAMMUGUM, T. E., BOSE, B. K., SEN, INDRA & LUTHRA, B. R., Symposium on "Education of Youth". *Proc. 39th Indian Sci. Congr. Pt. IV*, 131-135, 1952.

58. DONGERKERY, S. R., Some Universities of the Commonwealth. *Educ. Quart.* **4** (15) 180-185, 1952.

59. GREEN, T. L., A social evaluation of science teaching in Ceylon. *Ceylon Teacher* **16** (75) 113-117, 1952.

60. GREEN, T. L., Some aspects of educational research in Ceylon. *Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 24-25, 1952.

61. GREEN, T. L., Education and social needs in Ceylon. *Univ. Ceylon Rev.* **10** (4) 297-316, 1952.

62. HART, C. A., Engineering and the Universities in India and the United Kingdom. *J. Ass. Prince. techn. Instns. (India)* **5** (3) 113-119, 1952.

63. JENNINGS, IVOR, The expansion of University education. *Ceylon Teacher* **16** (76) 156-163, 1952.

64. KAPUR, B. D., The soldier and the scientist. *Def. Sci. J.* **2** (2 & 3) 98-102, 1952.

65. KAUL, G. N., Indian philosophy and education. *J. Educ. & Psych.* **10** (2) 82-86, 1952.

66. KHAN, MOHD HALIM, Philosophy and education. *J. Educ. & Psych.* **10** (3) 141-144, 1952.

67. KHER, B. G., Need for evolving national system of education. *Indian J. Educ.* **14** (3) 157-160, 1952.

68. MATHAI, SAMUEL, Coordination of University education in India. *Educ. Quart.* **4** (15) 157-161, 1952.

69. M. N. S., Education in India. *Sci. & Cult.* **18** (1) 1-3, 1952.

EDUCATION

70. MOOKHERJI, A., The film in technical education. *J. Ass. Princ. techn. Instns. India* 5 (2) 70-73, 1952.

71. NAEGAMVALA, J. P., University education for the engineering profession and a curriculum for graduation in civil engineering. *J. Instn. Engrs. (India)* 33 (1) 101-112, 1952.

72. NARENDRA DEVA, The problems of our education. *Indian J. Educ.* 14 (3) 141-156, 1952.

73. PATIL, S. K., Education for the masses. *Indian J. Educ.* 14 (3) 161-165, 1952.

74. PIRES, EDWARD A., Attitudes of Student-teachers towards children's behaviour. Studies in Education & Psychology. Pamphlet No. 1. Ministry of Education, Bureau of Education. Available : Manager of Publications, Civil Lines, Delhi. Price Rs. 1/2/- ; Sh. 1-9d.

75. ROY, M. N., Education of the educators. *Indian J. Educ.* 14 (4) 230-235, 1952.

76. SEN, A. (Miss), Reliability and validity of staff assessment of students in teachers' colleges. *J. Educ. & Psych.* 10 (3) 133-140, 1952.

77. SAN, INDRA, Education of the youth. *J. Educ. & Psych.* 10 (3) 114-122.

78. SRINAGARBHUSHANA, SHRI, Problem of employment for technical personnel. *J. Ass. Princ. techn. Instns. India* 5 (2) 67-69, 1952.

79. SWARUP D., Present day relations between technical institutions and industrial concerns. *J. Ass. Princ. techn. Instns. India* 5 (2) 78-80, 1952.

80. ULLAH, SALAMAT, How to teach mathematics in basic schools. *Educ. Quart.* 4 (16) 235-240, 1952.

81. VARMA, M., Validity of mental tests. *J. Educ. & Psych.* 10 (3) 123-127, 1952.

82. Symposia : Selection of entrants to technical institutions. *J. Ass. Princ. techn. Instns. India* 5 (2) 81-91, 1952.

83. Symposia : Training within industry. *J. Ass. Princ. Instns. India* 5 (2) 92-95, 1952.

84. Symposia : Coordination of technical education. *J. Ass. Princ. techn. Instns. India* 5 (2) 96-103, 1952.

85. Research work in technical institutions in India. *J. Ass. Princ. techn. Instns. India* 5 (2) 104-109, 1952.

86. Higher education in India. (editorial) *Sci. & Cult.* 18 (2) 53-56, 1952.

SCIENTIFIC DEVELOPMENT AND RESEARCH IN GENERAL

87. BRAGANZA, J. V. P., Scientific method and the appreciation. *J. Instn. milit. Engrs.* 4 (4) 269-276, 1952.

88. CHATTERJI, N. N., Translation of foreign literature. *Sci. & Cult.* 18 (6) 269-271, 1952.

89. COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH (INDIA), National Register of Scientific and Technical Personnel in India. Scientists and technologists 3 (Pt. I). Rs. 12-. Available from CSIR. Publications Division, Old Mill Road, New Delhi.

90. GARDNER, A. L., Scientific translation services. *J. sci. industr. Res.* 11A (11) 485-487, 1952.

91. HAYES, W. B., The preparation of articles for publication. *Allahabad Farm.* 26 (6) 207-218, 1952.

92. INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE, Annual Report of Indian Association for the Cultivation of Science for 1951-52. Pp ii+40.

93. INTER-UNIVERSITY BOARD OF INDIA., List of subjects in Arts and Science in which research was carried out in the Universities and Research Institutions. June, 1950 to May 1952. Delhi. 1953. Pp 450.

94. INTER-UNIVERSITY BOARD OF INDIA., Bibliography of Doctorate theses in Science and Arts accepted by Indian Universities for 1950-52, Delhi 1953. Pp 33.

95. MAJUMDAR, R. C., Growth of scientific spirit in ancient India. 14th Acharya Jagdish Chandra Bose Memorial Lecture, 1-18, 1952.

96. MITRA, R. D., Some suggestions for the preparation of scientific papers. *Sci. & Cult.* **18** (1) 8-12, 1952.

97. NATIONAL INSTITUTE OF SCIENCES OF INDIA, Annual Report of the Council for the year ending 31-3-52. Pp 23. Available: NISI, Mathura Road, New Delhi.

98. NATIONAL INSTITUTE OF SCIENCES OF INDIA, Report of the Council for 1950-51. Pp 47. Available: NISI, Mathura Road, New Delhi.

99. RAJASTHAN ACADEMY OF SCIENCES, Annual Report of the Rajasthan Academy of Science, 1951-52. *Proc. Rajasthan Acad. Sci.* **III**. 65-72, 1952.

100. ROONWAL, M. L., Plea for the development of scientific research and natural resources survey in Rajasthan. (Presidential address). *Proc. Rajasthan Acad. Sci.* **III**. 60-64, 1952.

101. SEN, S. N., Roger Bacon and his search for a universal science. *Sci. & Cult.* **18** (5) 228-232, 1952.

102. S. N. S., Dilemma of Science. *Sci. & Cult.* **18** (6) 274-276, 1952.

103. SHAH, P. G., Mysticism and Science. *J. anthrop. Soc. Bombay (N. S.)* **5** (2) 76-120, 1951.

104. THAPER, R. S., The scientific approach to life. *Everyday Sci.* **1** (1) 58-63, 1952.

105. UKIL, A. C., Science, Society and Health. (editorial). *Sci. & Cult.* **18** (6) 257-260, 1952.

389 STANDARDIZATION

106. RANGANATHAN, S. R., Standardizing abbreviation of titles of periodical publications. *ISI Bull.* **4** (2) 41-45, 1952.

107. VERMAN, LAL C., Standardization—its principles and development in the world and the ECAFE region. *ISI Bull.* **4** (1) 3-9, 1952.

108. ISI Certification marks. *ISI Bull.* **4** (2) 37-38, 1952.

39 ETHNOLOGY

109. BHATTACHARYYA, A., The Dharma cult. *Bull. Dep. Anthropol.* **1** (1) 117-153, 1952.

110. BOSE, NIRMAL KUMAR, Some aspects of culture change in modern Bengal. *Man in India* **32** (4) 189-197, 1952.

111. CHOWDHURY, U., Marriage customs of the Santals. *Bull. Dep. Anthropol.* **1** (1) 86-116, 1952.

112. DAS, S. R., A study of the Vrata rites of Bengal. *Man in India* **32** (4) 207-245, 1952.

113. ELWIN, V., The Saora priestess. *Bull. Dept. Anthropol.* **1** (1) 59-85, 1952.

114. FUCHS, STEPHEN, Ancient cultural links between America, Asia and Oceania. *J. anthrop. Soc. Bombay (N. S.)* **5** (2) 51-75, 1951.

115. HERMANN, M., Tibetan Lamaism up to the time of the reform by Tzon Khapa. *J. anthrop. Soc. Bombay (N. S.)* **5** (2) 7-36, 1951.

116. JEFFREYS, M. D. W., Confessions by Africans. *East. Anthropol.* **6** (1) 42-67, 1952.

117. KAIKINI, V. M., Vedic religion and Zoroastrianism. *J. anthrop. Soc. Bombay (N. S.)* **5** (2) 37-50, 1951.

118. MADAN, T. N., Superstition in the daily life of Kashmiri pandits. *East. Anthropol.* **6** (1) 37-41, 1952.

119. MADAN, T. N., Education of tribal India. *East. Anthropol.* **5** (4) 179-182, 1952.

120. MAYER, ADRIAN, C., The Holi festival among the Indians. *East. Anthropol.* **6** (1) 3-17, 1952.

121. MEIGHAN, CLEMENT W., Mortuary customs in Southern India. *East. Anthropol.* **5** (4) 143-164, 1952.

122. RAJ, HILDA, Education of Adibasis. *East. Anthropol.* **5** (4) 174-178, 1952.

123. RAVI VARMA, L. A., Onam tradition of Kerala. *East. Anthropol.* **5** (4) 170-173, 1952.

124. SINHA, T. C., Formation of Garo clan. *Samiksa* **6** (2) 119-135, 1952.

125. VON FURER-HAIMENDORF, CHRISTOPH, Ethnographic notes on some communities of the Wynad. *East. Anthropol.* **6** (1) 18-36, 1952.

5 NATURAL SCIENCES

502.7 PROTECTION OF NATURE

126. GEE, E. P., India's vanishing wild life. *Loris* **6** (2) 44-47, 1952.

127. PHILLIPS, W. W. A., Protection of game birds, ducks and pigeons in Ceylon. *Loris* **6** (2) 52-54, 1952.

BOMBAY NATURAL HISTORY SOCIETY

128. Annual Report of the Bombay Natural History Society for the year ending 31st December, 1951. *J. Bombay natr. hist. Soc.* **51** (1) 302-317, 1952.

51 MATHEMATICS

GENERAL

129. GOVINDA RAO, N. S., The role of mathematics in engineering. *Math. Stud.* **29** (1) 38-39, 1952.

130. NARASINGA RAO, A., The role of mathematics in engineering. *Math. Stud.* **20** (1) 29-34, 1952.

131. RAMAKRISHNA, B. S., Some aspects of Engineering mathematics. *Math. Stud.* **20** (1) 35-37, 1952.

511 ARITHMETIC. THEORY OF NUMBERS

132. AULUCK, F. C., Partitions of bipartite numbers. (abstr.) *Math. Stud.* **20** (1) 16-17, 1952.

133. BASU, N. M., A note on partitions. *Bull. Calcutta math. Soc.* **44** (1) 27-30, 1952.

134. BASU, N. M., Corrections to the paper "A note on partitions". *Bull. Calcutta math. Soc.* **44** (3) 142, 1952.

135. KAPREKAR, D. R., Self numbers. (abstr.) *Math. Stud.* **20** (1) 22-23, 1952.

136. RAI, T., On a problem of additive theory of numbers. *J. sci. Res. Banaras Hindu Univ.* II. 219-220, 1951-52.

137. SHANKARANARYANA RAO, U. R., Testing for divisibility. *Math. Stud.* **20** (2) 82-84, 1952.

138. SINGH, DALJIT, On the divisibility of Eulerian and prepared Bernoullian numbers by prime numbers. *Math. Stud.* **20** (2) 71-73, 1952.

139. SINGH, DALJIT, The numbers $L(m, n)$ and their relations with prepared Bernoullian and Eulerian numbers. *Math. Stud.* **20** (2) 66-70, 1252.

512 ALGEBRA

140. FILIPOWSKY, R., Numerical calculations in Electrical Engineering. Pt. 1.—Calculation of determinants of higher order and solution of simultaneous algebraic equations. *J. Madras Instn. Techn.* **1** (1) 64-89, 1952.

141. LAKSHMI BAI, C., The multiplication method of the Ethiopians. *Math. Stud.* **20** (2) 84-85, 1952.

142. MACNERNEY J. S., Half-bounded matrices. *J. Indian math. Soc.* **16** (4) 151-176, 1952.

143. NANJUNDIAH, T. S., Sharpenings of some classical inequalities. (abstr.) *Math. Stud.* **20** (1) 24-25, 1952.

144. SHARMA, AMBIKESHWARA, On the zeros of certain complex polynomials. (abstr.) *Math. Stud.* **20** (1) 21, 1952.

145. VENKATACHALAM, IYER, R., On "Tarry's problem". (abstr.) *Math. Stud.* **20** (1) 22, 1952.

513 GEOMETRY

146. BAGCHI, HARIDAS, Note on the harmonic polars and the Cayleyan of a cubic. *Proc. nat. Acad. Sci. (India)* **18A** (Pt. IV) 125-135, 1949.

147. BAGCHI, HARIDAS, Note on circular cubics and bicircular quartics. *Proc. nat. Acad. Sci. (India)* **17A** (Pts. V & VI) 169-184, 1948.

MATHEMATICS

148. BALACHANDRAN, V. K., A characterization of the lattice of μ -ideals of a distributive lattice. (abstr.) *Math. Stud.* **20** (1) 23, 1952.

149. BALIAH, RANI (Miss), The general conic in oblique coordinates. *Math. Stud.* **20** (2) 77-80, 1952.

150. BHATTACHARYA, P. B., A note on the principal radii of curvature. *Proc. nat. Acad. Sci. (India)* **18A** (Pts. V & VI) 167-169, 1949.

151. CHAKI, M. C., On a non-symmetric harmonic space. *Bull. Calcutta math. Soc.* **44** (1) 37-40, 1952.

152. COURT, N. A., Orthological triangles. *Math. Stud.* **20** (2) 51-57, 1952.

153. KRISHNA, SHRI, On the congruence of Ribaucour. *Ganita* **3** (1) 59-70, 1952.

154. KRISHNASWAMI AVYANGAR, A. A., Configurations associated with a finite set of points in the Euclidean plane. (abstr.) *Math. Stud.* **20** (1) 18-19, 1952.

155. LAKSHMANA RAO, S. K. & RAMAKRISHNA, B. S., Certain trigonometric summations. *Proc. Indian Acad. Sci.* **36A** (3) 208-210, 1952.

156. LAKSHAMMA, M. R., The spherical cycloidal curve. *J. Mysore Univ. (N. S.) (B)* **13** (1) 39-42, 1952.

157. MANIKARNIKAMMA, S. N., The second curvature of a geodesic on a hyper-surface of a Riemannian space. (abstr.) *Math. Stud.* **20** (1) 20-21, 1952.

158. MISRA, R. S., On the congruences of lines. *Ganita* **2** (2) 83-88, 1951.

159. MISHRA, R. S., On some curves in a subspace. (abstr.) *Math. Stud.* **20** (1) 19-20, 1952.

160. MISHRA, R. S., Hyper-asymptotic curves of Riemannian hypersurface. *Math. Stud.* **20** (2) 63-65, 1952.

161. MISHRA, R. S., A set of (M-N) congruences of curves through points of a subspace V_n of a Riemannian V_m . *Ganita* **3** (2) 95-102, 1952.

162. MISHRA, R. S., On isotropic congruences. *Ganita* **2** (1) 45-49, 1951.

163. MISHRA, R. S., On the congruences of curves through points of a subspace imbedded in a Riemannian space. (abstr.) *Math. Stud.* **20** (1) 20, 1952.

164. MISHRA, R. S., Congruence of curves through points of a hypersurface. *Ganita* **3** (1) 37-40, 1952.

165. NARASINGA RAO, A., On the Kalidasa effect. *J. Madras Inst. Techn.* **1** (1) 105-113, 1952.

166. PADMAVALLY, K., A generalization of Cantor-Bendixon theorem. (abstr.) *Math. Stud.* **20** (1) 24, 1952.

167. PURUSHOTHAM, S., Principal axes and planes of a quadric for any number of dimensions. *Math. Stud.* **20** (2) 80-82, 1952.

168. RANGASWAMI AIYER, K., On a system of circles represented by a Steiner Quartic surface. *Ganita* (p.er 103-109, 1952).

169. RAU, P. S., Real parabolas through the mid-points of the sides of a plane triangle. (abstr.) *Math. Stud.* **20** (1) 21-22, 1952.

170. SRINIVASIENGAR, C. N., & MUKHERJEE, B. N., Normal linear complex of a quadric surface. (abstr.) *Math. Stud.* **20** (1) 17, 1952.

171. SUBBA RAO, M. V., On the lattice product-topology. (abstr.) *Math. Stud.* **20** (1) 27, 1952.

172. SUN, JENNING T., Frenet formulas for a subspace W_m in a Weyl space W_n . *Bull. Calcutta Math. Soc.* **44** (2) 75-85, 1952.

517 ANALYSIS

173. ANSARI, A. R., On prime representing function. *Ganita* **2** (2) 81-82, 1951.

174. BALAGANGADHARAN, K., A quasi-Tauberian theorem on Fourier series. *J. Indian math. Soc.* **16** (4) 183-190, 1952.

175. BALASUBRAMANIAN, N., Some identities of operators and their applications. *Math. Stud.* **20** (2) 74-76, 1952.

176. BASU, S. K., A note on the oscillation of the Cesaro and Holder means of a sequence and a function. *Bull. Calcutta math. Soc.* **44** (2) 45-50, 1952.

177. BHATNAGAR, K. P., On a new relation in the theory of generalised Laplace integral. *Ganita* **3** (1) 13-18, 1952.

178. BOSE, B. N., On certain theorems in operational calculus. *Bull. Calcutta math. Soc.* **44** (3) 93-111, 1952.

179. BOSE, N. N., On MacRobert's E-function. *Bull. Calcutta math. Soc.* **44** (2) 63-68, 1952.

180. BOSE, S. K., A theorem on Whittaker transform. *Bull. Calcutta math. Soc.* **44** (2) 51-54, 1952.

181. BOSE, S. K., Some sequences of Laplace transform. *Bull. Calcutta math. Soc.* **44** (3) 127-131, 1952.

182. BOSE, S. K., On generalised Laplace integral. *Ganita* **2** (1) 33-43, 1951.

183. BOSE, S. K., Generalised Laplace integral of two variables. *Ganita* **3** (1) 23-35, 1952.

184. BUCK, R. CREIGHTON, On the distribution of the zeros of an entire function. *J. Indian math. Soc.* **16** (4) 147-149, 1952.

185. CONOLLY, B. W., An application of the 'Faltung formula'. *Ganita* **2** (1) 50-52, 1951.

186. DINESH, CHANDRA, On Whittaker transform. *Ganita* **3** (1) 1-11, 1952.

187. GANAPATHY IYER, V., On the space of integral functions—III. (abstr.) *Math. Stud.* **20** (1) 16, 1952.

188. HSIANG, FU CHENG, On the integro-jump of a function and its Fourier coefficients. *Bull. Calcutta math. Soc.* **44** (2) 55-58, 1952.

189. JAISWAL, J. P., Two properties of Meijer transform. *Ganita* **3** (2) 85-90, 1952.

190. LAKSHAMMA, M. R. (Miss), Plane cubic curves and elliptic functions. (abstr.) *Math. Stud.* **20** (1) 26, 1952.

191. MANIKARNIKAMMA, S. N., The second curvature of a geodesic on a hypersurface of a Riemannian space. *Proc. Indian Acad. Sci.* **36A** (3) 175-184, 1952.

192. MUKHERJEE, B. N., A note on the secend solution of Hermite's equation. *Bull. Calcutta math. Soc.* **44** (3) 124-126, 1952.

193. NARAIN, R. D. (Miss),, On a Ridae function. *Ganita* **2** (1) 1-8, 1951.

194. PANDE, NIRMALA, A class of Dirichlet's series possessing essential characteristics of a Taylor's series. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. I) 17-23, 1952.

195. PANDE, NIRMALA & KHANNA, GIRJA, On certain Dirichlet's series. *Proc. nat. Acad. Sci. (India)* **21A**(Pt. I) 41-44, 1952.

196. PARAMESWARAN, M. R., Some converse theorems of Summability. *Proc. Indian Acad. Sci.* **36A** (5) 363-369, 1952.

197. PRAKASH, VED, On certain integrals involving hypergeometric functions and operational images. *Ganita* **2**(2) 68-74, 1951.

198. RAJAGOPAL, C. T., Some inverse theorems for the $R(\lambda n, k)$ -transform of a sequence. (Lett.) *Math. Stud.* **20**(1) 25-26, 1952.

199. RAM KUMAR, A pair of functions which are Hankel transforms of each other. *Ganita* **3** (2) 79-84, 1952.

200. ROY, S. N., Some useful results in Jacobians (research note). *Calcutta statist. Ass. Bull.* **4** (15) 117-122, 1952.

201. SEN, B. B., Some recent methods for solving problems of equilibrium and vibration. (Presidential address) *Proc. 39th Indian Sci. Congr.* Pt. II 33-44, 1952.

202. SEN, R. N., Corrections to my papers "On an algebraic system generated by a single element and its application in Reimannian geometry". *Bull. Calcutta math. Soc.* **44** (2) 92, 1952.

203. SHARMA, A., On the differentiability of the remainder in Mazzoni's formula. *Ganita* **2** (2) 65-67, 1951.

204. SHARMA, A., On an application of a method of Shohat to a problem of Lukacs. *Ganita* **2** (1) 9-22, 1951.

205. SHARMA, A., On the zeros of a certain polynomial. *Proc. nat. Inst. Sci. India* **18** (6) 491-493, 1952.

206. SHAH, G. T., A note on the roots of a known quartic in $p(\mu)$ ". *J. Univ. Poona (Math. Sect.)* (2) 1-2, 1952.

207. SHAH, S. M., On means of entire functions. (abstr.) *Math. Stud.* **20** (1) 18, 1952.

208. SHAH, S. M., A note on entire functions of perfectly regular growth. (abstr.) *Math. Stud.* **20** (1) 17-18, 1952.

209. SHAH, S. M. & ISHAQ, MOHD, Quasi-monotone series and an extension of Dvoretzky's theorem. *Proc. Indian Acad. Sci. (A)* **36** (5) 402-404, 1952.

210. SHAH, S. M. & ISHAQ, M., On the maximum modulus and the coefficients of an entire series. *J. Indian math. Soc.* **16** (4) 177-182, 1952.

211. SHUKLA, U. K., On points of non-symmetrical differentiability of a continuous function. *Ganita* **2** (2) 54-61, 1951.

212. SNEHLATA, On infinite integrals involving products of Sturze's functions. *Proc. nat. Acad. Sci. (India)* **21A**(Pt. I) 25-31, 1952.

213. SNEHLATA, On generalisations of Laplace Stieltjes Transform Parts I, II & III. *Proc. nat. Acad. Sci. (India)* **21A**(Pt. I) 51-62; 63-73; 75-80, 1952.

214. SRIVASTAVA, H. M., On certain connections between the generalised K-function of Bateman and Legendre and parabolic cylinder functions. *Bull. Calcutta math. Soc.* **44** (2) 59-62, 1952.

215. SRIVASTAVA, H. M. & CHAK, A. M., Mitra-Srivastava's $P_n, k(x)$ function and confluent Hypergeometric function. *Ganita* **3** (1) 19-22, 1952.

216. SRIVASTAVA, R. S. L., On a class of method of summability. *Ganita* **3** (2) 71-77, 1952.

217. THOSAR, Y. V., Two theorems on operational calculus (abstr.) *Math. Stud.* **20** (1) 22, 1952.

218. THOSAR, Y. V., On recurrence relations involving Legendre's associated functions of one kind only. *Proc. Indian Acad. Sci.* **36A** (2) 128-129, 1952.

219. VENKATARAMAN, C. S., On the equivalence of a Ramanujan's sum and Von Sternecks function. (abstr.) *Math. Stud.* **20** (1) 21, 1952.

220. VISWANATHAM, B., On the asymptotic behaviour of solutions of non-linear differential equations. *Proc. Indian Acad. Sci.* **36A** (5) 335-342, 1952.

221. VISVANATHAN, S., On the use of auxiliary differential equations in orthogonal expansions. *Math. Stud.* **20** (2) 58-62, 1952.

519 STATISTICS. CALCULUS OF PROBABILITY.
VARIATIONS. GROUP. THEORY

222. BAHADUR, R. R., A property of the *t*-statistic. *Sankhya* **12** (Pts. 1 & 2) 79-88, 1952.

223. BANERJI, D. P., On some inequalities in the theory of probability. *Ganita* **2** (1) 53, 1952.

224. BASU, D., On the minimax approach to the problem of estimation. *Proc. nat. Inst. Sci. India* **18** (4) 287-299, 1952.

225. BASU, D., An example of non-existence of a minimum variance estimator. *Sankhya* **12** (Pts. 1 & 2) 43-44, 1952.

226. BASU, D., On symmetric estimators in point estimation with convex weight functions. *Sankhya* **12** (Pts. 1 & 2) 45-52, 1952.

227. BASU, D., On a class of admissible estimators of the normal variance. *Sankhya* **12** (Pts. 1 & 2) 57-62, 1952.

228. BHATTACHARYYA, A., On the uses of the *t*-distribution in multivariate analysis. *Sankhya* **12** (Pts. 1 & 2) 89-104, 1952.

229. BOSE, R. C., A note on Nair's condition for partially balanced incomplete block designs with $K > r$. (research note). *Calcutta Statist. Ass. Bull.* **4** (15) 123-126, 1952.

230. CHAKRAVARTI, M., Use of the analysis of covariance in two stage sampling (research note). *Calcutta statist. Ass. Bull.* **4** (15) 127-129, 1952.

231. CHANDRA, K., A note on the comparative efficiency of selection of sampling units with and without replacement. (Lett.) *Sci. & Cult.* **18** (6) 288-289, 1952.

232. CHANDRASEKAR, C. & CHAKRABORTY, P. N., On the concept and use of orthogonal semi-polynomials. *Sankhya* **12** (Pts. 1 & 2) 141-150, 1952.

233. DES RAJ, On a generalised Bessel function population. *Ganita* **3** (2) 111-115, 1952.

234. DES RAJ, On estimating the parameters of normal populations from singly truncated samples. *Ganita* **3** (1) 41-57, 1952.

MATHEMATICS

235. FINNEY, D. J., The estimation of the ED 50 for a logistic response curve. *Sankhya* **12** (Pts. 1 & 2) 121-136, 1952.

236. GAYEN, A. K., The inverse hyperbolic sine transformation on Students' for non-normal samples. *Sankhya* **12** (Pts. 1 & 2) 105-108, 1952.

237. GHOSH, M. N., An extension of Wald's decision theory to unbounded weight functions. *Sankhya* **12** (Pts. 1 & 2) 8-26, 1952.

238. GHOSH, S. K., Industrial quality control and its application to munitions production. *J. Instn. Engrs. (India)* **33** (1) 86-92, 1952.

239. KISHEN, K. & RAO, C. R., An examination of various inequality relations among parameters of the balanced incomplete block designs. *J. Indian Soc. agric. Statist.* **4** (2) 137-144, 1952.

240. KRISHNA IYER, P. V., Factorial moments and cumulants of distribution arising in Markoff chains. *J. Indian Soc. agric. Statist.* **4** (2) 113-123, 1952.

241. KRISHNA IYER, P. V., Non-parametric methods in the analysis of time series. (discussions). *Proc. 39th Indian Sci. Congr. Pt. IV*, 88-89, 1952.

242. MAHALANOBIS, A., Statistical quality control in an Indian manufacturing concern. *Sankhya* **12** (Pts. 1 & 2) 161-164, 1952.

243. MAHALANOBIS, P. C., Some aspects of the design of sample surveys. *Sankhya* **12** (Pts. 1 & 2) 1-7, 1952.

244. MANN, HENRY B., On the estimation of parameters determining the mean value function of a stochastic process. *Sankhya* **12** (Pts. 1 & 2) 117-120, 1952.

245. NAGABHUSHNAM, K., Some aspects of stationary time series. *Sankhya* **12** (Pts. 1 & 2) 109-116, 1952.

246. NAGABHUSHNAM, K., Application of the spectral theory to time series. (discussion). *Proc. 39th Indian Sci. Congr. Pt. IV*, 85-87, 1952.

247. NAIR, K. R., Relation between efficiency of incomplete block designs and the inter class correlations associated with incomplete and complete blocks. (research note). *J. Indian Soc. agric. statist.* **4**(2) 149-152, 1952.

248. PRIMROSE, E. J. F., Resolvable balanced incomplete block designs. *Sankhya* **12** (Pts. 1 & 2) 137-140, 1952.

249. RADHAKRISHNA RAO, C., Some theorems on minimum variance estimation. *Sankhya* **12** (1 & 2) 27-42, 1952.

250. RADHAKRISHNA RAO, C., Minimum variance estimation in distributions admitting ancillary statistics. *Sankhya* **12** (Pts. 1 & 2) 53-56, 1952.

251. RADHAKRISHNA RAO, C., Discriminatory analysis in time series. (discussion). *Proc. 39th Indian Sci. Congr. Pt. IV*, 89, 1952.

252. RANGASWAMI, K., A new method in the theory of correlation (abstr.) *Math. Stud.* **20**(1) 27-28, 1952.

253. RAMACHANDRAN, G., A note on the moments of a function of "run lengths". *J. Madras Univ.* **22B** (1) 92-101, 1952.

254. RAO, K. S., Tests of significance in time series. (discussion). *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 87-88, 1952.

255. ROY PURNENDU MOHON, A note on the resolvability of balanced incomplete block designs (research note). *Calcutta statist. Ass. Bull.* **4**(15) 130-132, 1952.

256. RUSHTON, S., On sequential tests of the equality of variances of two normal populations with known means. *Sankhya* **12** (Pts. 1 & 2) 63-78, 1952.

257. SHAH A. B., Polynomial expansion of the moments of a distribution. *J. Univ. Poona (Math. Sect.)* **1**(2) 1-4, 1952.

258. SINGH, B. N., Use of Complex Markoff chains in testing randomness (research note). *J. Indian Soc. agric. Statist.* **4**(2) 145-148, 1952.

259. SUNDARARAJAN, M. S., The theory of probability distribution of points on a circle. *J. Madras Univ.* **22B**(1) 109-118, 1952.

260. SURYANARAYANA, O., Application of the variate difference method to analysis of two time series. *J. Madras Univ.* **22B**(2) 234-260, 1952.

261. SURYANARAYANA, O., A note on the correlogram of the generalised moving average. *J. Madras Univ.* **22B**(1) 102-108, 1952.

262. THAWANI, V. D., A simple method of construction of symmetrical confounded factorial designs. *J. Indian Soc. agric. Statistic* **4**(2) 124-136, 1952.

263. TIPPETT, L. H. C., Quality control in Indian textile mills. *Indian Tex. J.* **62**(744) 716-718, 1952.

264. UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL, Sub Commission on statistical sampling. Report on Statistical sampling. *Sankhya* **12** (Pts. 1 & 2) 165-204, 1952.

265. VASWANI, SUNDARI, Introduce quality control and avoid undue adjustments on machines. *Indian Tex. J.* **63**(747) 162-168, 1952.

266. FOURTH ANNUAL REPORT, 1950-51—Indian Society of Agricultural Statistics. *J. Indian Soc. agric. Statist.* **4**(2) 153-162, 1952.

521/525 GENERAL

267. BANDYOPADHYAY, G., A note on the limiting mass of a rotating white dwarf. *Bull. Calcutta math. Soc.* **44** (2) 89-91, 1952.

268. BANERJI, A. C., Report on astronomical and astrophysical observations in Europe, America and in India. *Proc. nat. Acad. Sci. (India)* **20A** (Pt. 6) 270-308, 1951.

269. BANERJI, A. C., The age of the Universe (Presidential address). National Academy of Sciences, India, Business matters, Pp 8-14, 1946.

270. CHATTERJI, L. D., Radial pulsations of the two stellar models. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. 2) 118-125, 1952.

271. GUOSH, N. L., On the equilibrium of a thin atmosphere round a heavy central core: Spheroidal and anchor-ring configurations. *Bull. Calcutta math. Soc.* **44** (1) 22-26, 1952.

272. KUSHWAHA, R. S., Adiabatic pulsations of a particular model of the variable star. *Proc. nat. Inst. Sci. India* **18 (5)** 461-466, 1952.

273. MAJUMDAR, NANDAGOPAL, A note on the apparent disappearance of radiation in the theory of expanding universe. *Bull. Calcutta math. Soc.* **44** (2) 86-88, 1952.

ASTRONOMY

274. ROY, TOPENDRA CH., Stellar model with large radius. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 2, 1952.

275. SEN, S. N., Total solar eclipse of February, 1952. *Sci. & Cult.* **18** (1) 22-25, 1952.

276. SINGH, L., Recurrence of planetary orbits (Lett.) *Sci. & Cult.* **18** (1) 37-38, 1952.

277. Kodaikanal Observatory Bulletins.
 Nos. CXXVIII Pp 17 Rs. 1/8/-
 CXXIX Pp 16 Rs. 1/6/-
 CXXX Pp 11 Rs. 1/-
 CXXXI Pp 7 As. 9/-

279. BHATTACHARYA, PRABHAT K., Time keeping and the fundamental standard of time. *Sci. & Cult.* **18** (2) 71-76, 1952; **18** (3) 129-134, 1952.

280. KHAREGAT, PHEROZE M., The development of the Iranian calendars. *J. anthrop. Soc. Bombay (N. S.)* **6** (1) 14-36, 1952.

527/529 APPLIED ASTRONOMY

278. BASU, B. K., The reform of the Indian Calendar. (Lett.) *Sci. & Cult.* **18** (5) 250, 1952.

282. Research on measurement of geological time in India- 1947-50. *J. sci. industr. Res.* **11A**(9) 390-394, 1952.

53 PHYSICS

53.0 GENERAL

287. JAISWAL, J. P., On the Null geodesics and Null-cones in some gravitation fields. *Ganita* **2** (1) 23-32, 1951.

283. LUTHRA, S. D. L., Hydraulic models—their types, usefulness and limitations. *Irrig. & Powr. J.* **9** (4) 557-573, 1952.

288. RAYCHAUDHURY, AMAL KUMAR, Radiation sphere in Einstein universe. *Bull. Calcutta math. Soc.* **44** (1) 31-36, 1952.

284. WALLAUSCHEK, R., Introduction to the Giorgi system of units. *J. Madras Inst. Techn.* **1** (1) 114-132, 1952.

53.0.1 FUNDAMENTALS

289. SENGUPTA, N. D., On the solution of the equation of electron in the field of electromagnetic radiation. *Bull. Calcutta math. Soc.* **44** (3) 132-136, 1952.

285. BISWAS, S. N., Influence of radiation damping on the scattering of pseudoscalar charged mesons by nucleons. *Indian J. Phys.* **26** (12) 617-626, 1952.

290. UDGAONKAR, B. M., Relativistic field quantization. *Proc. Indian Acad. Sci. (A)* **36** (6) 482-492, 1952.

286. GHOSH, B. N., Fundamental length and mesonic mass. (Lett.) *Sci. & Cult.* **18** (1) 48-49, 1952.

291. VAIDYA, P. C., The boundary conditions in gravitational fields of spherical symmetry. *J. Univ. Bombay* **21A** (N. S.) (Pt. 3) (32) 1-7, 1952.

PHYSICS

532 MECHANICS OF FLUIDS. HYDRAULICS

cf. also 280, 291, 296

292. ADVANI, R. M., Computation of critical depth in trapezoidal channels. *Irrig. & Powr. J.* **9**(2) 210-221, 1952.

293. BALLABH, RAM, On two dimensional superposable flows. *J. Indian Math. Soc.* **16** (4) 191-197, 1952.

294. BHATIA, K. L., Energy available for wind mills in India. *J. sci. industr. Res.* **11A** (8) 329-333, 1952.

295. GHOSH, N. L., Note on a class of exact solutions of the two-dimensional flow problem for viscous incompressible fluid. *Proc. nat. Inst. Sci. India* **18** (5) 473-479, 1952.

296. GHOSH, N. L., A note on the transition from viscous to perfect fluid flow. *Proc. nat. Inst. Sci. India* **18** (5) 467-472, 1952.

297. KHARE, R. C., A case of tidal waves on an open sheet of water of variable depth. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. 2) 81-97, 1952.

298. LUTHRA, S. D. L., The parabolic liquid jets. *Irrig. & Powr. J.* **9** (1) 117-121, 1952.

299. MUKHERJEE, SANTI RAM, Motion in fluids of variable density and varying coefficient of viscosity. *Proc. nat. Acad. Sci. (India)* **17A** (Pts. V & VI) 185-194, 1948.

300. PALIT, SANTI R., Some general relations on the viscosity of homologous liquids. *Indian J. Phys.* **26** (12) 627-636, 1952.

301. PRAKASH, PREM, On two dimensional superposable motions. *Ganita* **2** (2) 75-80, 1951.

302. PRAKASH, PREM, General steady flow superposable on a constant velocity. *Ganita* **3** (2) 91-93, 1952.

303. RAY, M., Velocity and temperature distributions in a liquid flowing over an infinite plate: Boundary layer theory. *Bull. Calcutta math. Soc.* **44** (3) 137-141, 1952.

304. VENKATESAN, N.S., A note on the relation between maximum pressure and shot-start pressure. *Proc. nat. Inst. Sci. India* **18**(4) 265-271, 1952.

533 MECHANICS OF GASES

305. GURURAJACHARYA, Y. V. & JANKI RAM, G., Bessel functions in Vortex theory of propellers. (abstr.) *Math. Stud.* **20**(1) 23-24, 1952.

306. LAKSHMANA RAO, S. K., Geometry of airfoils. (abstr.) *Math. Stud.* **20**(1) 26, 1952.

534 VIBRATIONS. WAVES. SOUND ACOUSTICS

307. BALAKRISHNA, S., Granular structure in rock sections and transmission of sound. (Lett.) *Cur. Sci.* **21**(9) 241-242, 1952.

308. BALAKRISHNA, S., Sound velocities of some South Indian rock specimens. *Proc. Indian Acad. Sci. (A)* **36**(5) 375-380, 1952.

309. DATTA, N. K., Investigation on the bowed string with an electrically driven bow. (Pt. II). *Indian J. Phys.* **26**(12) 577-584, 1952.

310. GHOSH, R. N., Theory of the clarinet. *Proc. nat. Acad. Sci. (India)* **18A** (Pts. V & VI) 159-166, 1949.

PHYSICS

311. GHOSH, M. & GHOSH, S. K., Dynamics of the elastic vibration in a bar excited by longitudinal impact. Pt. II. Study of the time of collision. *Indian J. Phys.* **26**(9) 463-471, 1952.

312. SANKARAN, C. R., Phonemics of old Tamil. Pp. VI+71+2 plates. 1951. Rs. 8/- Available : Deccan College Research Institute, Poona, 6.

313. SANKARAN, C. R., A contribution to the study of speech structure. *Bull. Deccan Coll. Res. Inst.* **12** (1 & 2) 217-240, 1951.

314. SANKARAN, C. R., Epistemology and the Alpha-Phonoid theory. *Bull. Deccan Coll. Res. Inst.* **12**(1-2) 241-245, 1951.

315. SANKARAN, C. R., A note on the epistemological implications of the Alpha-Phonoid theory. *Bull. Deccan Coll. Res. Inst.* **12** (1-2) 246-247, 1951.

316. TASKAR, A. D., Vowel-length. *Bull. Deccan Coll. Res. Inst.* **12** (1-2) 252-258, 1951.

317. TASKAR, A. D., Quantitative analysis of languages. *Bull. Deccan Coll. Res. Inst.* **12** (1-2) 259-264, 1951.

318. VERMA, GURUDEVA SHARAN, Absorption measurements at low frequencies in some liquids. *Proc. nat. Acad. Sci. (India)* **18A** (Pts. V & VI) 149-157, 1949.

535 OPTICS

319. BOSE, S. K., Maximum and minimum function of a meromorphic function. *Bull. Calcutta math. Soc.* **44** (2) 69-74, 1952.

320. SINGH, JAGDEO, A study of the nocturnal variation in the intensity of zodiacal light and night sky at Banaras. Pt II. *J. sci. Res. Banaras Hindu Univ.* II, 131-141, 1951-52.

321. SINGH, JAGDEO, A study of the nocturnal variation in the intensity of the zodiacal light and night sky at Banaras. Pt III. *J. sci. Res. Banaras Hindu Univ.* II, 142-146, 1951-52.

REFRACTIVE INDICES

322. VENKATARAMAN, S., Refractivity of organic vapours. (Lett.) *Cur. Sci.* **21** (9) 241, 1952.

SPECTRA IN GENERAL EMISSION SPECTRA

323. APPALANARASIMHAM, N., Spectroscopic studies of ozoniser discharges. Pt. II. *J. sci. Res. Banaras Hindu Univ.* II, 121-130, 1951-52.

324. APPALANARASIMHAM, N., Spectroscopic studies of ozoniser discharges. Pt. III. Effect of irradiation on the intensity distribution of the second positive-nitrogen bands. *Indian J. Phys.* **26** (10) 512-518, 1952.

325. ASUNDI, RAMACHANDRA K. (Jr.) Anamolous effective rotational temperature of HgH bands. (Lett.) *Cur. Sci.* **21** (8) 216-217, 1952.

326. ASUNDI, R. K. & APPALANARASIMHAM, N., Spectral studies of ozoniser discharges in nitrogen. (Lett.) *Cur. Sci.* **21** (9) 240-241, 1952.

327. ASUNDI, R. K. & BHATTACHARYA, B. N., The emission bands of aniline. (Lett.) *Cur. Sci.* **21** (11) 308, 1952.

328. KRISHNAMURTY, V. G., The complex band spectrum of nickel bromide. (NiBr). *Indian J. Phys.* **26** (9) 429-441, 1952.

329. RAMASASTRY, C., Band spectrum of carbon-disulphide. Pt. III. *Proc. nat. Inst. Sci. India* **18** (6) 621-626, 1952.

330. RAMASASTRY, C., Ultra-violet bands of mercury iodide molecule. Pt. V. *Proc. nat. Inst. Sci. India* **18** (6) 487-490, 1952.

PHYSICS

331. RAO, P. TIRUVENGANNA, The complex band spectrum of diatomic manganese chloride in the visible region. *Proc. nat. Inst. Sci. India* **18** (6) 481-486, 1952.

535.33 SPECTRA IN GENERAL

332. SINGH, NAND LAL, On the so-called boric acid fluctuation bands. *J. sci. Res. Banaras Hindu Univ.* II, 147-152, 1951-52.

333. SODHA, MAHENDRA SINGH, Resolution of two spectral lines of unequal intensity. (Lett.) *Sci. & Cult.* **18** (5) 248-249, 1952.

535.34 ABSORPTION SPECTRA

cf. also 1497, 1498.

334. ASUNDI, R. K., BHATTACHARYA, B. & APPALANARASIMHAM, M., The blue bands of benzaldehyde. (Lett.) *Cur. Sci.* **21** (10) 273-275, 1952.

335. BISHU, B. M., The ultraviolet absorption spectra and the intensity of the fluorescence band 4156 \AA of diamond. *Indian J. Phys.* **26** (7) 347-356, 1952.

336. GARG, SATYA NARAIN, On continuous absorption in near ultra-violet spectrum of toluene at high temperatures. (Lett.) *J. sci. industr. Res.* **11B** (10) 447-449, 1952.

337. GARG, SATYA NARAYAN, On the absorption spectrum of benzaldehyde vapour. *J. sci. Res. Banaras Hindu Univ.* II, 153-157, 1951-52.

338. RAMDAS, A. K., The infra-red absorption spectrum of potassium chlorate crystals—Pt. II. *Proc. Indian Acad. Sci. (A)* **36** (1) 55-60, 1952.

339. SUR, P. K. & MAJUMDAR, K., The absorption spectrum of SbS molecule. *Proc. nat. Acad. Sci. (India)* **20A** (Pt. 6) 251-259, 1951.

340. SWAMY, H. N., The ultraviolet absorption spectra of organic substances in the liquid and solid states IV. Chlorotoluenes. *Indian J. Phys.* **26** (9) 445-451, 1952.

535.36/37 LUMINESCENCE, FLOURESCENCE, RAMAN SPECTRA

cf. also 536

341. BOSE, H. N., SHARMA, J. & CHATTERJEE, A., On the luminescence of some organic phosphor under X-rays and cathode rays. *Proc. nat. Inst. Sci. India* **18** (5) 389-398, 1952.

342. HASKAR, C. N., Recent advances in our knowledge of fluorescent reagents. *Agra Univ. J. Res. (Sci.)* **1**, 177-183, 1952.

343. NARAYANAN, P. S., Raman spectrum of carborundum. (Lett.) *Cur. Sci.* **21** (9) 239-240, 1952.

344. RAMAN, C. V. & KRISHNAMURTI, D., Iridescent crystals. *Cur. Sci.* **21** (12) 327-330, 1952.

345. RAMAN, C. V. & KRISHNAMURTI, D., On the iridescence of potassium chlorate crystals. Pt. I. Its spectral characters. *Proc. Indian Acad. Sci. (A)* **36** (5) 315-320, 1952.

346. RAMAN, C. V. & KRISHNAMURTI, D., On the iridescence of potassium chlorate crystals. Pt. II. Polarisation effects. *Proc. Indian Acad. Sci. (A)* **36** (5) 321-329, 1952.

347. RAMAN, C. V. & KRISHNAMURTI, D., On the iridescence of potassium chlorate crystals. Pt. III. Some general observations. *Proc. Indian Acad. Sci. (A)* **36** (5) 330-334, 1952.

348. RAMAN, C. V. & KRISHNAMURTI, D., On the polarisation and spectral character of the iridescence of potassium chlorate crystals. *Proc. Indian Acad. Sci. (A)* **36** (6) 419-424, 1952.

435.417 INTERFERENCE

349. SODHA, MAHENDRA SINGH, Intensity considerations in Lummer-Gehrecke plate. (Lett.) *J. sci. industr. Res.* **11B** (9) 395-396, 1952.

535.5 POLARISATION, DOUBLE REFRACTION

350. CHANDRASEKHAR, S., Some remarks on the optical rotary dispersion of quartz. *Proc. Indian Acad. Sci. (A)* **36** (2) 118-122, 1952.

536. HEAT. THERMODYNAMICS

351. DEVANATHAN, M. A. V., The thermodynamic theory of ideally polarisable electrodes. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 33-34, 6952.

352. MURGAI, M. P., Thermo-dynamic functions of T. N. T. *Def. Sci. J.* 2 (1) 52-59, 1952.

353. SAXENA, S. P., Studies in heat transfer. *Sci. & Cult.* 18 (1) 18-22, 1952.

354. SHARMA, R. S., Isotherms of copper. *J. sci. Res. Banaras Hindu Univ.* II, 113-120, 1951-52.

355. SREEDHAR, A. K., Thermal expansion of crystals at low temperatures. Pt. I. Sugar. *Proc. Indian Acad. Sci. (A)* 36 (2) 141-147, 1952.

537. ELECTRICITY.

537.2 ELECTROSTATICS. DIELECTRICS

356. JATKAR, S. K. K. & KULKARNI, S. B. (Miss), Dielectric constants of pure liquids and dipole moments. *J. Univ. Poona (Chem. Sect.)* 1 (2) 1-2, 1952.

357. JATKAR, S. K. K. & DESHPANDE, C. M. Dipole moment of polyatomic molecules. *J. Univ. Poona (Chem Sect.)* 1 (2) 3-6, 1952.

358. SANKARAN, R. & KHASTGIR, S. R., Dielectric properties of salt solutions in the range of ultra high frequencies (230-330 Mc/S). *J. sci. Res. Banaras Hindu Univ.* II, 101-112, 1951-52.

359. SARNA, H. R. & TREHAN, P. N. Some measurements on the dielectric polarisation of alcohol mixtures. (Lett.) *Cur. Sci.* 21 (11) 306-307, 1952.

360. SRIVASTAVA, S. S. & RANGAN, C. S., Dielectric constant and attenuation in dielectric materials in 3 cm. region. *J. sci. industr. Res.* 13B (12) 507-511, 1952.

537.5 ELECTRIC DISCHARGES. RADIATION

361. APPAPILLAI, V. & MAILVAGANAM, A. W., & WOLFENDALE, A. W., A preliminary note on the Ceylon University cosmic ray magnet, its performance and on some results obtained with it. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 36, 1952.

362. APPAPILLAI, V. & PERERA, P. A. S., An apparatus for the measurement of curvature. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 34, 1952.

363. BHATNAGAR, CHAITANYASWARUP & BHAWALKAR, D. R., Studies in Electrets—Pt. I. *Proc. Indian Acad. Sci. (A)* 36 (3) 170-174, 1952.

364. CHAUDHURI, A. K., Scattering of electrons and contrast in the electron-micrographs of shadow-cast specimens. *Proc. nat. Inst. Sci. India* 18 (6) 585-594, 1952.

365. CHOWDHURI, B., SAXENA, R. C. & SUBRAMANIAN, A., On the penetrating component in air showers. *Proc. Indian Acad. Sci. (A)* 36 (6) 457-471, 1952.

366. DEB, S., Current division in plane positive grid triode. *Indian J. Phys.* 26 (8) 377-392, 1952.

367. DEODHAR, G. B. & MANDE, CHINTAMANI, X-ray absorption coefficients of mica. *J. sci. industr. Res.* 11B (7) 265-268, 1952.

368. DESHMUKH, M. B., Ozonizer discharge. *J. Univ. Bom. 21A (N. S.) (Pt. 3)* (32) 8-10, 1952.

369. GUPTA, N. N., The optical principles of the low angle scattering of X-rays. *Proc. nat. Inst. Sci. India* 18 (5) 379-388, 1952.

370. JNANANANDA, SWAMI, Long magnetic lens Beta-ray spectrometers. Pt. I—Theory. *J. sci. industr. Res.* 11B (10) 397-400, 1952.

371. JNANANANDA, SWAMI, Long magnetic lens Beta-ray spectrometers. Pt. II—Design and construction. *J. sci. industr. Res.* 11B (10) 401-407, 1952.

372. KAPUR, P. L., Proton—proton scattering of the contribution of the p-wave. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 2, 1952.

373. KHASTGIR, S. R. & SETTY, P. S. V., Negative Joshi effect in A/C. Silent discharges in relation to applied voltage. (Lett.) *Sci. & Cult.* 18 (4) 189-191, 1952.

374. KHASTGIR, S. R. & SRIVASTAVA, C. M., Effect of heat on the frequency of the R. F. oscillations in A. C. silent discharges (Lett.) *Cur. Sci.* **21** (11) 307, 1952.

375. MANDE, CHINTAMANI, The 's-t' doublet in the mercury L x-ray spectrum. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. I) 11-15, 1952.

376. MOMIN, A. U., Modification of the Beckmann model 1R₂ infra-red spectrophotometer for use with external radiation sources. (Lett.) *J. sci. industr. Res.* **11B** (7) 307-308, 1952.

377. MUKHERJEE, S. M., Structure of cellulosic fibres under the electron microscope. *Sci. & Cult.* **18** (5) 215-217, 1952.

378. PANDE, A. & BAHADUR, K., Design of a radio frequency high voltage capacitor for electron microscope. *J. sci. industr. Res.* **11B** (10) 408-411, 1952.

379. PENDSE, G. N., Allotropic modification of a substance and the Joshi effect. *Agra Univ. J. Res. (Sci.)* **1**, 233-237, 1952.

380. RAMAIAH ATCHUTA, N. & TIWARI, G. S., Pulse behaviour in the production of negative Joshi effect in water vapour. (Lett.) *J. sci. industr. Res.* **11B** (9) 392-394, 1952.

381. SAHASRABUDHEY, R. H., DESHPANDE, S. M. & GOPAL RAO, R. V., Oxidation of ethanol under silent electric discharge. *Proc. Indian Acad. Sci. (A)* **36** (4) 253-266, 1952.

382. SAXENA, A. P., Incidence of Joshi effect in the high frequency part of the discharge current. *Agra Univ. J. Res. (Sci.)* **1**, 239-242, 1952.

383. SAXENA, A. P., A note on light-sensitivity of a resonance frequency pulse in the discharge current of an ozonizer. (Lett.) *J. sci. industr. Res.* **11B** (7) 311-312, 1952.

384. SAXENA, B. D. & RAIZADA, P. S., Ring frequencies of Dioxane and Trioxane. *Proc. Indian Acad. Sci. (A)* **36** (4) 267-277, 1952.

385. SETTY, P. S. V., KULKARNI, K. (Miss) & SRIVASTAVA, C. M., Seat of Joshi effect in A. C. silent discharges. *Indian J. Phys.* **22** (9) 455-462, 1952.

386. SRIKANTAN, B. V. & NARANAN, S., Cosmic rays underground. *Proc. Indian Acad. Sci. (A)* **36** (2) 97-117, 1952.

387. TALEKAR, V. L., A thermionic meter for measuring rectification ratio of current in discharge tubes. *Indian J. Phys.* **26** (7) 329-336, 1952.

388. TAYLOR, H. J., SITARAMASWAMI, M. & KRISHNAMOORTHI, P. N., High altitude balloon experiments and measurement of the heavy primary radiation flux at the geomagnetic equator. *Proc. Indian Acad. Sci. (A)* **36** (1) 41-54, 1952.

538 MAGNETISM

389. BOSE, A. & MITRA, S. C., The comparative influence of short and long range crystalline electric fields on the magnetic behaviour of the paramagnetic salts of the iron group of elements. Pt. II. *Indian J. Phys.* **26** (8) 393-426, 1952.

390. BOSE, A. & MITRA, S. C., The comparative influence of short and long range crystalline electric fields on the magnetic behaviour of the paramagnetic salt of the iron group of elements. Pt. II. *Indian J. Phys.* **26** (11) 543-562, 1952.

391. JAISWAL, J. P., A note on electromagnetic phenomena in gravitational fields. *Ganita* **2** (2) 62-64, 1952.

392. KAR, S. C., Versuch einer logischen quantendynamik des elektrons (I). *Bull. Calcutta math.* **44** (1) 1-21, 1952.

393. RAMASESHAN, S. & SURYAN, G., Paramagnetic resonance in some cupric salts. *Proc. Indian Acad. Sci. (A)* **36** (3) 211-216, 1952.

539.1 MOLECULAR AND ATOMIC STRUCTURE

394. AMALDI, E., Diffraction effects in the scattering of neutrons μ mesons and electrons by nuclei. *Proc. Indian Ass. Cult. Sci.* **35** (12) 1-47, 1952.

395. BANDYOPADHYAY, DEBABRATA, Vander Waal's equation. (Lett.) *Sci. & Cult.* **18** (4) 191, 1952.

396. BHAR, J. N. & BHAR, B. N., On the phenomenon of "Wiggles" or "Beats" in nuclear magnetic resonance signals. (Lett.) *Sci. & Cult.* **18** (2) 86-88, 1952.

397. BHATTACHARYYA, BIMAL KRISHNA, Admittance and transfer function of a multimesh resistance capacitance filter network. *Indian J. Phys.* **26** (11) 563-573, 1952.

398. GHOSH, A. M. & SINGHA, M. S., On the identification of π and μ mesons by the method of momentum loss. *Trans. Bose Res. Inst.* **18**, 115-122, 1949-51.

399. JHA, S., On the formation of Alpha-particles in radioactive nuclei. *Proc. Indian Acad. Sci. (A)* **36** (6) 472-481, 1952.

400. LAL, D. PAL, YASH, PETER, B. & SWAMI, M. S., Production and interaction of mesons at very high energies. *Proc. Indian Acad. Sci.* **36A** (2) 75-96, 1952.

401. NARASIMHAN, P. T., Bond moments and induced moments. (Lett.) *Cur. Sci.* **21** (7) 181-182, 1952.

402. SEN, SUNIL KUMAR & BHATTACHARYYA, BIMAL KRISHNA, A study of the triggering of a plate coupled multivibrator by negative pulses. *Indian J. Phys.* **26** (12) 597-616, 1952.

403. SENGUPTA, S., A simple proof of Vander Waal's equation. (Lett.) *Sci. & Cult.* **18** (1) 35-36, 1952.

404. SENGUPTA, S., On closed proton shells in nuclei of atomic number less than fifty (Lett.) *Cur. Sci.* **21** (10) 272-273, 1952.

405. SREEKANTAN, B. V., Life-time of μ -mesons. *Proc. Indian Acad. Sci. (A)* **36** (4) 289-298, 1952.

406. SURYANARAYANA RAO, K., Term values of f_4 electron configuration-a correction. *Indian J. Phys.* **26** (8) 427, 1952.

407. VISWANATH, G., Calculation of electronic energy levels of indene. (Lett.) *Cur. Sci.* **27**(10) 275-276, 1952.

408. YADAV, H. N., Neutron-proton scattering. *Indian J. Phys.* **26** (7) 337-346, 1952.

539.2 STRUCTURE OF SOLIDS

cf. Mechanics of solids

409. KARUNES, B., A note on the problem of dislocation in a semi-infinite plate containing a circular hole. *Indian J. Phys.* **26** (9) 442-444, 1952.

410. KARUNES, B., On the distribution of initial stress due to dislocation in an infinite plate containing two unequal circular holes. *Indian J. Phys.* **26** (7) 317-328, 1952.

539.3 ELASTICITY

411. MAJUMDER, B. L., Young's modulus of elasticity of ceramic materials by flexure. *Trans. Indian Ceram. Soc.* **11** (3) 168-181, 1952.

412. SENGUPTA, H. M., On the bending of an elliptic plate under certain distributions of load (ii). *Proc. nat. Acad. Sci. (India)* **17** (Pts. V & VI) 143-167, 1948.

413. SENGUPTA, H. M., On the bending of an elastic plate III. *Bull. Calcutta math. Soc.* **44** (3) 111-123, 1952.

414. VENKATACHAR, V. P., Stress distribution under cylindrical aeolotropy (abstr.) *Math. Stud.* **20** (1) 28, 1952.

CHEMISTRY

GENERAL

415. BHATNAGAR, S. S., Prafulla Chandra Ray Memorial Lecture. *J. Indian chem. Soc.* **29** (9) 714-720, 1952.

416. NAIK, K. G., Prafulla Chandra Ray Memorial Lecture. *J. Indian chem. Soc.* **29** (10) 789-804, 1952.

541 THEORETICAL CHEMISTRY GENERAL CHEMISTRY

541.11,12 PHASE EQUILIBRIUM, CHEMICAL MECHANICS

417. ANANTAKRISHNAN, S. V., Kinetic studies in ester hydrolysis. Pt. VII. Solvent influences. *Proc. Indian Acad. Sci.* **36A** (3) 201-207, 1952.

418. BAFNA, S. L., GOVINDAN, K. P. & BHAGWAT, W. V., Reactions of iodine : Pt. IV.—Reaction between iodine and malonic acid. *J. sci. industr. Res.* **11B** (9) 376-378, 1952.

419. BHAGWAT, W. V., Application of mixture law to rheochor of ternary mixtures. *J. Indian chem. Soc.* **29** (9) 691-694, 1952.

420. BHATTACHARYYA, S. K., & RAMACHANDRAN, V. S., Differential thermal analysis of catalyst powders. Pt. III. Differential thermal analysis of zinc oxide-chromic oxide mixture. (Lett.) *J. sci. industr. Res.* **11B** (12) 550-551, 1952.

421. CHANMUGAM, J., Chain reactions and ignitions. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 37-38, 1952.

422. GAYER, KARL H. & GARRETT, A. B., The equilibria of antimonous oxide (Rhombic) in dilute solutions of hydrochloric acid and sodium hydroxide at 25°C. *Proc. nat. Acad. Sci. (India)* **21A** (Suppl.) 11-16, 1952.

423. GHOSH, J. C. BHATTACHARYYA, S. K. GOPAL-ASWAMY, S. N. & RAMACHANDRAN, V. S., Differential thermal analysis of catalyst powders : Pt. I. Differential thermal analysis of chromic oxide gel. (Lett.) *J. sci. industr. Res.* **11B** (12) 547-549, 1952.

424. KAZI, H. J. (Miss) & DESAI, C. M., Effect of soap concentration on the inter-facial tension of some aliphatic alcohols and esters. (Lett.) *Cur. Sci.* **21** (8) 218, 1952.

425. MUKHERJEE, K. L., Kinetics of photo-chemical changes. *J. biol. Soc. Assam.* **1** (2) 13-15, 1951.

426. PAUL, RAM CHAND. LAL, KUNDAN, GAIND, V. S. & BAWA, S. S., The system potassium dihydrogen —arsenic acid-water. *J. Indian chem. Soc.* **29** (12) 937-938, 1952.

427. RAMACHANDRAN, V. S. & BHATTACHARYYA, S. K., Differential thermal analysis of catalyst powders : Pt. II—Differential thermal analysis of zinc oxide. (Lett.) *J. sci. industr. Res.* **11B** (12) 549-550, 1952.

428. SILAWAT, H. G. & BHAGWAT, W. V., Rheochor of binary mixtures. *J. Indian chem. Soc.* **29** (9) 706-708, 1952.

541.13 ELECTROCHEMISTRY

cf. also 472, 590, 591.

429. BHATTACHARYYA, S. K., MUTHANNA, M. S. & PATANKAR, A. D., Electrolytic reactions on porous carbon anodes : III, The preparation of ethylene chlorohydrin from ethylene. *J. sci. industr. Res.* **11B** (9) 365-368, 1952.

430. BHATTACHARYYA, S. K. MUTHANNA, M. S. & PATANKAR, A. D., Electrolytic reactions on porous carbon anodes : IV—The preparation of ethylene glycol from ethylene. *J. sci. industr. Res.* **11B** (9) 369-370, 1952.

431. CHATTERJEE, SAROJ KUMAR, Electrodialysis of ceramic raw materials at high voltage. A preliminary note. *J. Indian chem. Soc.* **29** (7) 549-553, 1952.

432. DOSS, K. S. G. & GUPTA, S. L., Behaviour of surface active substances at the dropping mercury electrode. *Proc. Indian. Acad. Sci.* **36A** (6) 493-500, 1952.

433. GHOSH, J. C. BHATTACHARYYA, S. K., MUTHANNA, M. S. & MITRA, C. R., Electrolytic reactions of porous carbon anodes : I—The preparation of p-Benzoyquinone by the oxidation of benzene. *J. sci. industr. Res.* **11B** (9) 356-361, 1952.

434. GHOSH, J. C., BHATTACHARYYA, S. K., MUTHANNA, M. S. & PARIKH, R. K., Electrolytic reactions on porous carbon anodes: V—The preparation of chloral from alcohol. *J. sci. industr. Res.* **11B** (9) 371-373, 1952.

435. GHOSH, J. C., BHATTACHARYYA, S. K., RAO, M. R. A., MUTHANNA, M. S. & PATNAIK, R. B., Electrolytic reactions on porous carbon anodes-II. The preparation of chlorobenzene from benzene. *J. sci. industr. Res.* **11B** (9) 361-364, 1952.

436. GOKHALE, S. D., Electrometric titrations of cuprous chloride. *J. Univ. Bombay.* **21A** (N. S.) (Pt. 3) (32) 74-77, 1952.

437. GOPAL, RAM & SRIVASTAVA, T. N., Conductance of iodine in pyridine. *J. Indian chem. Soc.* **29** (12) 898-900, 1952

438. GOYAL, D. P., SITARAMAIAH, G. & NAYAR, S. R., Quantitative studies of hypochlorite chlorate and perchlorate formed under different conditions during the electrolysis of calcium chloride solutions. *Proc. Rajasthan Acad. Sci.* **III**, 36-44, 1952.

439. NAYAK, B., ADITYA, S. & PRASAD, B., A study on salt bridges. *J. Indian chem. Soc.* **29** (12) 925-930, 1952.

440. PAWAR, A. A. & KABADI, M. B., Electrometric titrations of gel-forming systems. *J. Univ. Bombay* **21A** (N. S.) (Pt. 3) (32) 22-27, 1952.

441. PRASAD, B. N., Production of the Joshi-effect in mercury vapour under eletrical discharge—Pt. I. *Proc. Rajasthan Acad. Sci.* **III**, 7-27, 1952.

442. PRASAD, B. N. & PRASAD, B. B., Potential variation of the ozoniser impedance in the production of Joshi-effect. *Proc. Rajasthan Acad. Sci.* **III**, 1-6, 1952.

443. RAMAIAH, N. ATCHUTA & KAVEESHWAR, S. N., Further studies of Joshi effect in H_2O and D_2O vapour. *J. sci. Res. Banaras Hindu Univ.* **II**, 1-4, 1951-52

444. RAMAIAH, N. ATCHUTA., RATNAM, P. V. & PARAVATI DEVI, K. (Miss) The role of hydroxyl radical in surface sensitivity of Joshi effect in water vapour. *J. sci. industr. Res.* **11B** (12) 524-528, 1952.

445. RAMANAMURTI, M. V., Production of Joshi effect in iodine vapour under silent electric discharge. *J. sci. Res. Banaras Hindu Univ.* **II**, 46-79, 1951.52.

446. TRIVEDI, A. K. M., DIVATIA, A. S. & PATANI, M. J., Studies in iron oxide sols. Pt. I. Electrical conductivity of iron oxide sol. *Proc. Indian Acad. Sci.* **36A** (6) 530-536, 1952.

541.14 PHOTOCHEMISTRY

447. BHATTACHARYYA, S. K. & GULVADY, SHARDA (Miss), Photochemical studies on uranyl salts. Pt. I. The photochemical oxidation of ethyl alcohol, lactic acid and mandelic acid by uranyl nitrate in light of different frequencies. *J. Indian chem. Soc.* **29** (9) 649-658, 1952.

448. BHATTACHARYYA, S. K. & GULVADY, SHARDA (Miss), Photochemical studies on uranyl salts. Pt. II. The photochemical oxidation of ethyl alcohol and mandelic acid by potassium indigotetrasulphonate using uranyl nitrate and sulphate as photosensitisers in light of different frequencies. *J. Indian chem. Soc.* **29** (9) 659-666, 1952.

449. GULVADY, SHARDA (Miss) & BHATTACHARYYA, S. K., Photochemical studies on uranyl salts. Pt. III. The photochemical oxidation of ethyl alcohol and mandelic acid by Meldola's blue using uranyl nitrate as the photo-sensitiser in light of different frequencies. *J. Indian chem. Soc.* **29** (10) 731-736, 1952.

450. LAL, B. B., Photochemical after-effect in the bromine-oxalate reaction. *Proc. Indian Acad. Sci.* **36A** (2) 148-156, 1952.

451. LAL, B. B., Photochemical after-effect in $H_2O_2-K_4Fe(CN)_6$ reaction. *Proc. Indian Acad. Sci.* **36A** (4) 244-257, 1952.

452. SEN, A. B. & SHARMA, R. C., Studies on the solubility and light fastness of azo dyes Pt. II. *J. Indian chem. Soc.* **29** (12) 931-933, 1952.

541.18 COLLOID CHEMISTRY

453. BAFNA, S. L. & SHAH, H. A., Studies in ion-exchange. Pt. II. Studies of a synthetic cation exchange resin HP-6. *J. Indian chem. Soc.* **29** (8) 611-614, 1952.

454. BARVE, P. M. & JAMBOTKAR, A. R., Mutual coagulation of colloidal solutions. *J. Univ. Bombay* **21A** (N. S.) (32) 33-35, 1952.

455. DOSS, K. S. G. & SARASWAT, H. C., A technique for investigating the effect of pH on spreading property of substances. (Lett.) *J. sci. industr. Res.* **11B** (8) 349-350, 1952.

456. GHOSH, J. C. & GYANI, B. P., Viscosity of isoelectric gelatine solutions. *J. Indian chem. Soc.* **29** (8) 615-619, 1952.

457. GYANI, B. P. & SINHA, A. P. B., Sorption of water vapour by alumina gel. *J. Indian chem. Soc.* **29** (8) 582-588, 1952.

458. JEOFREV, SULTAN ALI S. & BHATTACHARYA, ABANI K., Studies on the sol-gel transformation of the ferro and ferricyanides of some metals Pt. I. *J. Indian chem. Soc.* **29** (7) 511-516, 1952.

459. JEOFREY, SULTAN ALI S. & BHATTACHARYA, ABANI K., Sol-gel transformation of the ferro and ferricyanides of some metals. Pt. II. Studies on the conductivity of zinc ferrocyanide during gelation. *J. Indian chem. Soc.* **29** (8) 626-631, 1952.

460. JHA, S. D., Nature of "structural flow" in sols. *Proc. nat. Acad. Sci. (India)* **21A** (Suppl.) 17-21, 1952.

461. KUMAR, RAMA & BHATTACHARYA, ABANI K., Coagulation of colloids. Variation of time of coagulation with electrolyte concentration. Pt. III. Studies with chromium hydroxide sol. *J. Indian chem. Soc.* **29** (9) 687-690, 1952.

462. KUMAR, RAMA & BHATTACHARYA, ABANI K., Coagulation of colloids. Variation of time of coagulation with concentration of electrolytes. Pt. IV. Studies with ferric hydroxide sol. *J. Indian Chem. Soc.* **29** (10) 759-764, 1952.

463. MITRA, S. P., Charge reversal of colloidal resin by basic dyes. *Proc. nat. Acad. Sci. (India)* **20A** (Pt. 6) 267-269, 1951.

464. MITRA, S. P., Adsorption of basic dyes by colloidal rosin. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. 2) 109-117, 1952.

465. MITRA, S. P., Negative acclimatization of rosin sols when coagulated by basic dyes. *Proc. nat. Acad. Sci. (India)* **20A** (Pt. 6) 260-261, 1951.

466. MITRA, S. P., The influence of concentration of basic dyes on the coagulation of rosin sols. *Proc. nat. Acad. Sci. (India)* **20A** (Pt. 6) 262-263, 1951.

467. MITRA, S. P., Nature of adsorption of basic dyes by rosin sol. *Proc. nat. Acad. Sci. (India)* **20A** (Pt. 6) 264-266, 1951.

468. NEOGY, R. K. & GHOSH, B. N., Studies on the viscosity of emulsions. *J. Indian chem. Soc.* **29** (8) 573-581, 1952.

469. PERTI, O. N. & MURTY, S. R. K., Rotatory dispersion of barium salt of Reychler's acid. (Lett.) *Cur. Sci.* **21** (7) 194, 1952.

470. PURI, BALWANT RAI, LAKHANPAL, M. L. & GUPTA, SUBHAS CHANDER, Studies in physico-chemical properties of milk. Pt. III. Determination of size distribution of fat globules in milk by the application of stores law. *Indian J. Dairy Sci.* **5** (4) 189-199, 1952.

471. PURI, BALWANT RAI, LAKHANPAL, M. L. & VARMA, BALVIR, Adsorption of vapours by charcoal. *J. Indian chem. Soc.* **29** (11) 841-845, 1952.

472. SHUKLA, G. K. & GHOSH, S., Effect of temperature over viscosity and electrical conductivity of colloids of iron silicates. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. 2) 98-108, 1952.

473. TRIVEDI, A. K. M. & PATANI, M. J., Constituents of colloidal arsenic sulphide. *J. Indian chem. Soc.* **29** (9) 683-686, 1952.

474. TRIVEDI, A. K. M. & PATANI, M. J., Hydration of colloidal arsenic sulphide. *J. Indian chem. Soc.* **29** (10) 747-750, 1952.

475. VISVANATHAN, K. S., MUTHUSWAMY, S. V. & KRISHNAMURTI, Studies of the Joshi effect in chlorine from the standpoint in the system of heat dissipation. *J. sci. Res. Banaras Hindu Univ.* **11**, 80-89, 1952-52.

541.2 ATOMIC THEORY

476. BHAGWAT, W. V., SHUKLA, R. P. & KHANDEKAR, S. G., Hydrogen bonding and resonance from the study of parachor. *J. Indian chem. Soc.* **29** (9) 679-682, 1952.

477. BHAGWAT, W. V., SHUKLA, P. R. & KHANDEKAR, S. G., Hydrogen bonding and resonance from the study of parachor. *Agra Univ. J. Res. (Sci.)* **1**, 169-175, 1952.

478. PANDA, S. & PRASAD, B., The apparent molal volume of sodium and potassium chloride at 35°. *J. Indian chem. Soc.* **29** (12) 907-910, 1952.

541.4 CHEMICAL COMBINATION. COMPOUNDS

479. GUPTA, S. R. & GHOSH, S., Yellow hydrous ferric oxide. *Proc. nat. Acad. Sci. (India) (Suppl.)* **21A**, 3-10, 1952.

480. PATEL, S. R., Preparation of the double sulphates of Vanadium and bivalent metal. *J. Univ. Bombay* **21A** (N. S.) (Pt. 3) (32) 11-13, 1952.

481. PRASAD, MATA, KHANDOLKAR, D. D., & DATAR, M. G., Magnetic study of double salts in solution. *Proc. Indian Acad. Sci.* **36A** (6) 544-551, 1952.

482. SRINIVASAN, N. R., Studies on Niobium and Tantalum. Pt. IV. Polynuclear complexes. *Proc. Indian Acad. Sci.* **36A** (3) 185-193, 1952.

483. TEWARI, S. N. & GHOSH, S., Studies in amphoteric nature of hydrated chromium oxide and the determination of its isoelectric point. *Proc. nat. Acad. Sci. (India)* **21A** (Suppl.) 29-40, 1952.

484. TEWARI, S. N. & GHOSH, S., Studies in the amphoteric nature of hydrated aluminium oxide and the determination of its isoelectric point. *Proc. nat. Acad. Sci. (India)* **21A** (Suppl.) 41-51, 1952.

485. TEWARI, S. N., DEV, ARUN K. & GHOSH, S., A note on the mechanism of ageing of hydrous oxides. *Proc. nat. Acad. Sci. (India)* **21A** (Suppl.) 52-54, 1952.

541.5 VALENCY. AFFINITY

c.f. also 476.

486. SAHASRABUDHEY, R. H. & BOKIL, INDUMATI (Miss), A new class of free radicals. (Lett.) *Cur. Sci.* **21** (9) 247, 1952.

541.6 CHEMICAL STRUCTURE

487. BHAGWAT, W. V., SHUKLA, R. P. & GUPTA, M. M., Parachor of ions. Pt. II. *J. Indian chem. Soc.* **29** (9) 701-705, 1952.

488. GYANI, B. P. & DAS, S. N., Free volumes and internal pressures of liquids and their entropies of evaporation. *J. Indian chem. Soc.* **29** (11) 858-864, 1952.

489. HARMALKAR, S. G., Muta-rotation of d-oxymethylene camphor and its condensation products with primary amines and of d-oxymethylene carvone. *Agra Univ. J. Res. (Sci.)* **1**, 161-168, 1952.

490. MITRA, S. P., Studies in the optical rotation of abietic acid. Pt. I. Optical rotation in cyclohexane and its derivatives. *Proc. nat. Acad. Sci. (India)* **18A** (Pt. IV) 137-148, 1949.

491. PHADKE, R. S., Studies in the dielectric constants of fatty acids. Pt. I. A comparative study of the equations of Onsager and of Jatkar in relation to experimental data of pure liquids. *J. Indian Inst. Sci.* **34A** (3) 189-207, 1952.

492. PHADKE, R. S., Studies in the dielectric constants of fatty acids. Pt. II. Correlation between the structure and dielectric constant of fatty acids. *J. Indian Inst. Sci.* **34A** (4) 293-304, 1952.

493. SHAMIM-AHMAD, SAIYID, Resonating semipolar single bond. *J. Indian Chem. Soc.* **29** (11) 880-886, 1952.

494. SHAMIM-AHMAD, SAIYID & NAQVI, MARGHOOB ALI, Resonating semipolar single bond. Pt. II. Boron hydrides. *J. Indian chem. Soc.* **29** (12) 939-943, 1952.

495. SHAMIM-AHMAD, SAIYID, Resonating semipolar single bond. Pt. III. Anomalous ratio of specific heats for gases. *J. Indian chem. Soc.* **29** (12) 943-944, 1952.

496. SHAMIM-AHMAD, SAIYID, Resonating semipolar single bond. Pt. IV. Resonating semipolar single bond and Pauling's scale of electronegativities. *J. Indian chem. Soc.* **29** (12) 945-947, 1952.

497. SHAMIM-AHMAD, SAIYID, Resonating semipolar single bond. Pt. V. Interpretation in terms of wave mechanisms and other theories. *J. Indian chem. Soc.* **29** (12) 947-949, 1952.

498. SHAMIM-AHMAD, SAIYID & HASAN, HAMEEDUL, Resonating semipolar single bond. Pt. VI. Molecular rearrangements. *J. Indian chem. Soc.* **29** (12) 955-960, 1952.

499. SHAMIM-AHMAD, SAIYID & HASAN, HAMEEDUL, Resonating semipolar single bond. Pt. VII. Reaction of the double bond (olefines). *J. Indian chem. Soc.* **29** (12) 961-964, 1952.

500. SINGH, BAWA KARTAR, & KAPUR, NARINDER SINGH, The refractive dispersive power of organic compounds. Pt. VI. The camphor β -sulphonates (d & dt.) of sodium hydroxide, *o*-*m*- and *p*-aminophenol and *p*-anisidine. *J. Indian chem. Soc.* **29** (8) 560-566, 1952.

501. SINGH, BAWA KARTAR, PANICKER, A. R. & RANGANATHAN, M. K., Studies on the nature of the racemic modifications of optically active compounds in the solid state. Pt. IX. Camphor β -sulphonamides, Camphor- β -sulphonanhydrides, Camphor- β -sulphon-phenyl, *o*-tolyl-*m*-tolyl, *p*-tolyl-, α -naphthyl-, and β -naphthyl-amides (d & dl). *Proc. Indian Acad. Sci.* **36 A** (6) 440-456, 1952.

502. SINGH, BAWA KARTAR & KAPUR, NARINDER SINGH, Studies on the dependence of optical activity on activity on chemical composition. Pt. XXXVIII. The camphor β -sulphonates (d and dl) of *m*-aminophenol, 3-amino-*o*-xylene, 4-amino-*o*-xylene 5-amino-*m*-xylene and 3-amino-*p*-xylene. *J. Indian chem. Soc.* **29** (11) 851-857, 1952.

541.8 SOLUTIONS AND SOLUBILITY IN GENERAL

503. DESHPANDE, V. V. & KABADI, M. B., The solubility of zinc hydroxide in potassium hydroxide. *J. Univ. Bombay* **21A** (N. S.) (Pt. 3) (32) 14-21, 1952.

504. EL-SHAMY, H. K., Studies on acid tungstate solutions. *J. Indian chem. Soc.* **29** (9) 667-673, 1952.

505. PANCHANATHAN, N. S., On supersaturation limits of solution. *J. Indian chem. Soc.* **29** (8) 646-647, 1952.

506. SADEK, HUSSEIN, Interaction between acids in solution. *J. Indian chem. Soc.* **29** (11) 846-850, 1952.

507. SRIKANTAN, B. S., Limits of supersaturation and nuclei formation. *J. Indian chem. Soc.* **29** (8) 674-678, 1952.

508. VENKATACHALLAM, C. N. & SRIKANTAN, B. S., Supersaturation coefficient and free surface energy of solute particles. *J. Indian chem. Soc.* **29** (8) 608-610, 1952.

542 EXPERIMENTAL PREPARATIVE CHEMISTRY

542.7 MANIPULATION OF GASES

509. BANDGIWALA, B. P. & DESAI, C. M., Cyclisation of ethyl benzoyl-acetate and benzoyl acetoacetate-anils using acetic anhydride and sulphuric acid. (Lett.) *Cur. Sci.* **21** (12) 348, 1952.

542.8 ELECTRIC AND GALVANIC MANIPULATIONS

510. ARNIKAR, H. J., The Joshi effect in solid-vapour system of selenium, tellurium and zinc. *J. Indian chem. Soc.* **29** (11) 823-840, 1952.

542.94 VARIOUS PROCESSES

511. MANOCHA, RAJINDRA, Chlorination of ilmenite. (Lett.) *Cur. Sci.* **21** (10) 281, 1952.

512. MARATHEY, M. G., Experiments in the benzoylpyrone series. Pt. II. Synthesis of flavones and benzylidene coumarones. *J. Univ. Poona (Chem. Dept.)* **1** (2) 11-18, 1952.

542.05 SPECIAL OPERATIONS IN ORGANIC CHEMISTRY

513. BAFNA, S. L. & SHAH, H. A., The mechanism of the condensation of ethyl acetoacetate with resorcinols. (Lett.) *Cur. Sci.* **21** (7) 185-186, 1952.

514. BHATTACHARYA, PROMODE RANJAN, Polyesterification of polyhydroxy-polybasic acids: Pt. I—9:10—Dihydroxy hexadecane—1:16—Dicarboxylic acid. *J. sci. industr. Res.* **11B** (12) 512-520, 1952.

515. BYATNAL, V. N. & DESAI, R. D., Studies in the Friedel-Crafts reaction. Pt. X. The action of acetic anhydride on the arylamides of β -resorcyclic acid. *J. Indian chem. Soc.* **29** (8) 555-559, 1952.

516. CHARI, K. S. & KULKARNI, B. S. Condensation of saturated vapours—Pt. IV. *J. sci. industr. Res.* **11A** (8) 346-353, 1952.

517. JADHAV, G. V. & NERLEKAR, P. G., Bromination of compounds containing two aromatic nuclei. Pt. XII. Bromination of arylamides of 2-methoxy-5-nitrobenzoic acid. *J. Indian chem. Soc.* **29** (10) 765-768, 1952.

518. KHUNDKAR, M. H., Reduction of borax and boric oxide melts by carbon. *J. Indian chem. Soc.* **29** (7) 477-483, 1952.

519. KHUNDKAR, M. H., Reduction of metallic oxides by carbon in boric oxide and borax melts. Pt. III. Cupric oxide, titanium and uranium dioxides. *J. Indian chem. Soc.* **29** (7) 467-476, 1952.

520. MISRA, G. S. & SHUKLA, J. S., N-nitrosoacylarylamines as catalysts in addition polymerisation. Pt. II. *J. Indian chem. Soc.* **29** (12) 895-897, 1952.

521. NARASIMHACHARI, N., RAJAGOPALAN, D. & SESHADRI, T. R., Use of methyl formate in isoflavone condensation. (Lett.) *J. sci. industr. Res.* **11B** (8) 347-348, 1952.

522. RAHMAN, AZIZUR & FAROOQ, M. O., Amide formation from acids and urea. (Lett.) *Cur. Sci.* **21** (12) 338-339, 1952.

523. RAMACHANDRAN, L. K., The effect of N^1 - and O-acylation on the periodate oxidation of hydroxylysine. *J. Madras Univ.* **22B** (1) 76-83, 1952.

524. SETALVAD, J. I., AMIN, G. C. & SHAH, N. M., Studies in Fries migration. Pt. VIII. Fries migration of the acyl esters of methyl 2:4-dihydroxy-5-ethylbenzoate and the corresponding acid. *J. Indian chem. Soc.* **29** (12) 915-920, 1952.

525. SHAH, N. M. & AMIN, G. C., The Fries rearrangement of isomeric acetoxy-resorcyclic acids and their esters. (Lett.) *Cur. Sci.* **21** (9) 246, 1952.

526. SINGH, R. N., CHAND, VISHNU & CHOJER, TEJ NARAIN, Condensation of aldehydes with phenylacetic acid. Pt. I. Condensation of benzaldehyde, salicylaldehyde, and anisaldehyde with phenylacetic acid. *Agra Univ. J. Res. (Sci.)* **1**, 153-160, 1952.

527. USGAONKAR, R. N., CHAKRAVARTI, K. K. & THAKOR, V. M., Attempted Pechmann condensation with 8-hydroxyquinoline. (Lett.) *J. sci. industr. Res.* **11B** (9) 396, 1952.

528. VARMA, P. S. & RAPHAEL, C. J., Halogenation. Pt. XXIV: Bromination of benzene. *J. sci. Res. Banaras Hindu Univ.* **II**, 90-100, 1951-52.

543 545 CHEMICAL ANALYSIS

529. AIRAN, A. W., Application of circular chromatography to inorganic analysis. (Lett.) *Sci. & Cult.* **18** (2) 89-90, 1952.

530. AIRAN, J. E. & WAGLE, D. S., β -naphthyl sulphide as spot test reagent for metallic radicals. (Lett.) *Cur. Sci.* **21** (12) 339, 1952.

531. ANANTAKRISHNAN, S. V. & SRINIVASA PAL, K. V., The Kjeldahl method of nitrogen determination. *Proc. Indian Acad. Sci.* **36A** (4) 299-305, 1952.

532. BHADURI, A. S., Estimation of Uranium (Gravimetric with Salicylhydroxamic acid. (Lett.) *Sci. & Cult.* **18** (2) 95, 1952.

533. BHADURI, A. S. & RAY, P., Colorimetric estimation of Uranium, Vanadium and Molybdenum by aromatic hydroxamic acids. (Lett.) *Sci. & Cult.* **18** (2) 97-98, 1952.

534. BHATNAGAR, R. K. & DUTT, S., The Baudoin test as applied to Vanaspati. *Indian Soap J.* **18** (6) 196-199, 1952.

535. BHATTACHARYA, H., Investigations on the analysis of mixed oxides of the elements of group Va and VIa. Pt. I. Preparation of pure tantalum and niobium pentoxide from Indian columbite and their analytical separation. *J. Indian chem. Soc.* **29** (11) 871-879, 1952.

536. BHATKI, K. S. & KABADI, M. B., Resacetophenone oxime as a reagent for the quantitative determination of nickel. (Lett.) *J. sci. industr. Res.* **11B** (8) 346, 1952.

537. BHEEMESWAR, BHARATHI & SREENIVASAYA, MOTNAHALLI, Papyrographic studies on peptides. *Cur. Sci.* **21** (8) 213-215, 1952.

538. BISWAS, T. D. & DAS, N. B., Chromatographic separation of carotene in materials containing lycopene. (Lett.) *Sci. & Cult.* **18** (2) 91-92, 1952.

539. BOSE, R. K. & BURMA, D. P., Paper chromatography in the study of sugar-constituents of jute hemicellulose. (Lett.) *Sci. & Cult.* **18** (1) 39-40, 1952.

540. BURMA, D. P., Chromatograms of the amino-acids on various grades of Whatman's filter papers. *J. Indian chem. Soc.* **29** (8) 567-572, 1952.

541. CHATTERJEE, H., Iodiform reaction with jute cellulose. *Jute Bull.* **15** (5) 230, 1952.

542. CHAWLA, S. L., Estimation of ethylene in presence of acetylene. (Lett.) *Sci. & Cult.* **18** (5) 238-239, 1952.

543. DAS, D. B., MITRA, M. K. & WAREHAM, J. F., A study on the association of xylan with α -cellulose in jute by partition chromatography. (Lett.) *Sci. & Cult.* **18** (5) 249-250, 1952.

544. DAS, D. B., ROY CHOUDHURY, P. K. & WAREHAM, J. F., A note on the constitution of jute by paper chromatography. (Lett.) *Sci. & Cult.* **18** (4) 197, 1952.

545. DESHMUKH, G. S. & SANKARANARAYAN, S. M., Determination of silver by selenious acid. *J. sci. Res. Banaras Hindu Univ.* **II**, 43-45, 1951-52.

546. DESHMUKH, G. S. & SANKARANARAYAN, K. M., Estimation of selenium by mercuric nitrate. *J. Indian chem. Soc.* **29** (7) 527-528, 1952.

547. DESHMUKH, G. S. & SANT, B. R., Iodometric estimation of ferricyanide by arsenic oxide. *J. Indian chem. Soc.* **29** (7) 543-544, 1952.

548. DESMUKH, G. S. & XAVIER, J., Determination of thorium by stearic, pyrogallic and m-hydroxybenzoic acids. *J. Indian chem. Soc.* **29** (12) 911-914, 1952.

549. DHAR, S. K. & DAS GUPTA, A. K., Colorimetric and volumetric estimation of zirconium. (Lett.) *J. sci. industr. Res.* **11B** (11) 500-501, 1952.

550. DHAR, S. K. & DAS GUPTA, A. K., Colorimetric estimation of calcium. *J. sci. industr. Res.* **11B** (12) 520-523, 1952.

551. GIRI, K. V., KRISHNAMURTHY, K. & VENKATESWARAN, T. A., Circular paper chromatography Pt. II. Amino acid analysis of proteins. *J. Indian Inst. Sci.* **34A** (3) 209-217, 1952.

552. GOPALA RAO, G. & SANKEGOWDA, H., Vando-metric estimation of tartaric acid. (Lett.) *Cur. Sci.* **21** (7) 188-189, 1952.

553. GOPALA RAO, G. & NARASIMHA SASTRI, M., Vanadometric estimation of Indigo and Indigo carmine. *Cur. Sci.* **21** (7) 189, 1952.

554. KALYANKAR, G. D., KRISHNASWAMY, P. R. & SREENIVASAYA, M., Papyrographic characterisation and estimation of organic acids in plants. (Lett.) *Cur. Sci.* **21** (8) 220-222, 1952.

555. KRISHNAMURTHY, K. & VENKATASUBRAMANYAN, T. A., Separation and identification of sugars in fruits by circular paper chromatography. (Lett.) *Cur. Sci.* **21** (10) 278, 1952.

556. KRISHNAMURTHY, K., VENKATASUBRAMANYAN, T. A. & GIRI, K. V., Preservation of chromatograms. (Lett.) *Cur. Sci.* **21** (9) 252, 1952.

557. LUDEKENS, W. L. W., The semi-micro determination of potassium by the cobaltinitrite method. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 34-35, 1952.

558. LUDEKENS, W. L. W. & VEERAVAGU, P., A modified procedure for the determination of calcium and magnesium in the presence of iron, aluminium, manganese and phosphate. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 35-36, 1952.

559. MACMILLAN, W. G. & SEN-GUPTA, A. B., Observation on the acidic properties of jute fibre. *J. Indian chem. Soc.* **29** (10) 737-746, 1952.

560. MADHAVAN NAIR, P., Co-precipitation of cobalt with chromium hydroxide. (Lett.) *Cur. Sci.* **21** (7) 186-187, 1952.

561. MAJUMDAR, A. K., Effect of mild alkali treatment on the acid value of jute. *Jute. Bull.* **15** (7) 229-230, 1952.

562. MAJUMDAR, ANIL KUMAR, & DE, ANIL KUMAR, 5:6-Benzoquinolinic acid as an analytical reagent. Pt. II. Estimation of cadmium and its separation from copper. *J. Indian chem. Soc.* **29** (7) 499-506, 1952.

563. MAJUMDAR, K. K., A new method for analysis of Xanthates. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr.)* 22-23, 1952.

564. MOHAN RAO, V. K., Paper chromatographic analysis of organic acids. (Horizontal migration method): Pt. I. *J. sci. industr. Res.* **11B** (7) 277-279, 1952.

565. NAIR, C. K. N. & GUPTA, J., Colorimetric estimation of Germanium: Pt. II.—Estimation of germanium in minerals. *J. sci. industr. Res.* **11B** (7) 274-276, 1952.

566. NARASIMHAN, G. & MENE, P. S., Determination of water in amyl alcohol by a modified conductance method. *Trans. Indian Inst. chem. Engrs.* **IV**, 92-96, 1950-51.

567. NARASIMHA SASTRI, M., RAMA RAO, M. V. & GOPALA RAO, G., Interference of formaldehyde in the volumetric estimation of ferrous salts. (Lett.) *Cur. Sci.* **21** (12) 337, 1952.

568. NEELAKANTAM, K. & PARTHASARATHI, K., Volumetric determination of manganese with 8-Hydroxy-quinoline. *Proc. Indian Acad. Sci. (A)* **36** (2) 123-127, 1952.

569. OZA, TRAMBAKLAL MOHAN LAL, The chemical estimation of hyponitrite, nitrite and nitrate of sodium in their admixture. *J. Indian chem. Soc.* **29** (11) 887, 1952.

570. PAUL, RAM CHAND, GAIND, V. S., MALHOTRA, O. P., & NAHAN, RAJKUMARI (Miss), Alkaline permanganate as a volumetric reagent (Pt. I). Estimation of organic hydroxy acids. *Res. Bull. East Punjab Univ.* No. 24, 123-127, 1952.

571. PILLAI, S. C. & MOHAN RAO, C. J., Influence of filtering medium on the clarification of sewage in biological filters. (Lett.) *Sci. & Cult.* **18** (6) 289-290, 1952.

572. RAMACHANDRAN L. K. & SHARMA, P. S., Error involved in the gravimetric determination of lysine in the presence of hydroxylsine. (Lett.) *Cur. Sci.* **21** (10) 280, 1952.

573. RAMAKRISHNAN, T., A note on a modified method of estimating magnesium. *J. Indian chem. Soc.* **29** (9) 713, 1952.

574. RAMANA RAO, D. V., The use of ammonium molybdate as catalyst in the estimation of dichromate. (Lett.) *Cur. Sci.* **21** (9) 244-245, 1952.

575. RAMANA RAO, D. V., Detection of Molybdenum-Importance of hydrogen ion concentration. (Lett.) *Cur. Sci.* **21** (9) 257, 1952.

576. RAMANARAO, D. V. & PRASAD, B., Use of ammonium molybdate as a catalyst in the iodometric estimation of ferric iron. (Lett.) *Cur. Sci.* **21** (12) 338, 1952.

577. RAO, P. S. & BERI, R. M., Analysis of amino acids using paper chromatography (Horizontal migration). *Proc. Indian Acad. Sci. (A)* **36** (5) 370-374, 1952.

578. RUDRA, M. N. & RUDRA, SIULI, Microdetermination of Selenium. (Lett.) *Cur. Sci.* **21** (8) 229, 1952.

579. SARMA, B., Separation of inorganic salts by paper chromatography Pt. III. Separation of uranium, thorium, and rare earth by partition chromatography on filter paper. *Trans. Bose Res. Inst.* **18**, 105-113, 1949-51.

580. SANYAL, S. N., Sterility effect of *Pisum sativum* (Linn.) chemical study. *Calcutta med. J.* **49** (9) 343-347, 1952.

581. SANYAL, S. N., Sterility effect of *Pisum sativum* Spectro-photometric study. *Calcutta med. J.* **49** (9) 348-353, 1952.

582. SEN GUPTA, MANIK LAL, Preparation of chromatographic alumina- Pt. I. *J. & Proc. Instn. chem. (India)* **24** (Pt. 4) 186-193, 1952.

583. SINGH, BALWANT & SINGH, APPAR, Potassium meta-periodate as a volumetric reagent. Pt. III. Determination of metals. *J. Indian chem. Soc.* **29** (7) 517-522, 1952.

584. SINGH, BALWANT & SINGH, APPAR, Potassium metaperiodate as volumetric agent. *Res. Bull. East. Punjab Univ.* No. 17, Pp 51-56, 1951-52.

585. SINGH, KAMALA PRASAD, Spectro-chemical estimation of boron. (Lett.) *Sci. & Cult.* **18** (4) 194-196, 1952.

586. SRINIVASAN, M. & SUBRAMANIAN, N., Chromatography and food analysis. *Bull. cent. food. techn. Res. Inst. Mysore* **2** (2) 44-47, 1952. **2** (3) 75-79, 1952.

587. SRINIVASA PAL, K. V., A note on the determination of reducing sugars. *J. Madras Univ.* **11B** (2) 201-205, 1952.

588. SUBBA RAO, D. & SHAH, G. D., A modified combustion tube for the micro-Dumas method for the estimation of nitrogen. (Lett.) *J. sci. industr. Res.* **11B** (11) 506, 1952.

589. VENKATESWARLU, P. & RAMANATHAN, A. N., A rapid titrimetric procedure for estimation of fluorine in potable water. *Indian J. med. Res.* **40** (4) 549-554, 1952.

546 INORGANIC CHEMISTRY

cf. also 483, 484, 518, 519, 535, 546, 547, 557, 558, 562, 573.

590. BHATTACHARYA, ABANI K. & SAXENA, RAM SAHAI, Studies on the composition of complex ferrous ferrocyanide by potentiometric method. *J. Indian chem. Soc.* **29** (7) 535-538, 1952.

591. BHATTACHARYA, ABANI K. & SAXENA, RAM SAHAI, Studies on the composition of Turnbull's blue (ferrous ferrocyanide) by thermometric method. *J. Indian chem. Soc.* **29** (7) 529-534, 1952.

592. BHATTACHARYA, H., Investigations on the analysis of the mixed oxides of the elements of group VA and IVA. Pt. II. Analysis of binary and ternary mixtures of tantalic and niobic acid and titania. *J. Indian chem. Soc.* **29** (12) 891-894, 1952.

593. DAS GUPTA, A. K. & SINGH, M. M., Detection and colorimetric estimation of vanadium with benzohydroxamic acid. *J. sci. industr. Res.* **11B** (7) 268-273, 1252.

594. DATTA, J., A note on the similarity of LiOH with the hydroxides of alkaline earth metals in the reactions with non-metals. *J. Indian chem. Soc.* **29** (12) 965, 1952.

595. DUTTA, J., Reactions with dry alkaline earth hydroxides Pt. III. Reduction of alkali nitrate by solid non-metals conducted in the presence of dry alkaline earth hydroxides. *J. Indian chem. Soc.* **29** (10) 751-758, 1952.

596. GHOSH, S. P., Nitrides of molybdenum. *J. Indian chem. Soc.* **29** (7) 484-488, 1952.

597. KUNDU, NAKULESWAR, Some organic compounds of gold with long chain fatty acids. *J. Indian chem. Soc.* **29** (7) 523-524, 1952.

598. LAL, KUNDAN, On the action of hydrogen sulphide on manganese dioxide. *J. Indian chem. Soc.* **29** (12) 934-936, 1952.

599. PATEL, S. R., Extraction of zirconia from zircon. (Lett.) *J. sci. industr. Res.* **11B** (11) 502-503, 1952.

600. PURI, BALWANT RAI & BHUSHAN, VIDYA, Hygroscopic properties of metallic oxides as prepared by different methods. (Lett.) *J. sci. industr. Res.* **11B** (11) 504-505, 1952.

601. RAO, G. S. & BANERJI, S. N., The decomposition of sodium molybdate by hydrochloric acid and the effect of ageing on the system. *Proc. nat. Acad. Sci. (India)* **21A** (Suppl.) 22-28, 1952.

602. SADEK, HUSSEIN, On compound formation between silicic acid and hydrochloric acid. *J. Indian chem. Soc.* **29** (7) 507-510, 1952.

603. SAWHNEY, P. L. & SESHADRI, T. R., Tetraethyl pyrophosphate (Tepp) a useful insecticide. (Lett.) *J. sci. industr. Res.* **11B** 348-349, 1952.

604. SAXENA, RAM SAHAI & BHATTACHARYA, ABANI, K., Studies on the composition of complex ferrous ferrocyanide by thermometric method. *J. Indian chem. Soc.* **29** (8) 632-635, 1952.

605. SINGH, BALWANT, SINGH, APAR & SINGH ROSHAN, Constitution of periodate of Uranium. *Res. Bull. East. Punjab Univ.* No. 23, 121-122, 1952.

606. SINGH, BALWANT, SINGH, APAR ROSHAN, Periodate of uranium. (Lett.) *Cur. Sci.* **21** (10) 277, 1952.

607. SRINIVASAN, N. R., Studies on Niobium and Tantalum. Pt. V. Tartratotantalates. *Proc. Indian Acad. Sci. (A)* **36** (4) 278-283, 1952.

608. SUBRAHMANYAM, V. S. & DATAR, D. S., Isomerisation of the dark green chromic chloride hexahydrate in acetone, a zero order reaction. (Lett.) *Cur. Sci.* **21** (9) 244, 1952.

609. VASUDEVA MURTHY, A. R., Studies in the chemical behaviour of some compounds of sulphur. Pt. II. Reaction between disulphur monoxide and hydrogen iodide. *Proc. Indian Acad. Sci. (A)* **36** (6) 425-439, 1952.

610. VASUDEVA MURTHY, A. R. Studies in the chemical behaviour of some compounds of sulphur. Pt. III. Formation of disulphur monoxide by the reaction between hydrogen sulphide and sulphur dioxide. *Proc. Indian Acad. Sci. (A)* **36** (6) 537-543, 1952.

611. ANANTAKRISHNAN, S. V., Oxidation of hydrocarbons. *J. Madras Inst. Techn.* **1** (1) 90-95, 1952.

CHEMISTRY

612. DHINGRA, D. R., KAPOOR, S. N. & KACKER, PREM N., Studies on the production of Methoxychlor or 1, 1, 1, 2-2 Bis (*p*-methoxyphenyl) trichloro ethane. *J. & Proc. Instn. Chem. (India)* **24** (Pt. 4) 194-204, 1952.

613. RAMACHANDRAN, P. K. & SAHASRABUDHEY, R. H., A procedure for the separation of methylamines. *J. Indian chem. Soc.* **29** (7) 489-492, 1952.

547.3 UNSATURATED COMPOUNDS

614. SULTANBAWA, M. U. S., The reactivity of methyl- β -Bromo- β - α -methoxycrotonate. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 36-37, 1952.

615. SULTANBAWA, M. U. S., Synthesis of β -Methyl- β -Methoxy-crotonic acid. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 37, 1952.

547.4 POLYVALENT COMPOUNDS POLYSUBSTITUTED COMPOUNDS

cf. also 1557

616. AVASARE, M. D., SHAH, M. L. & SHETH, N. M., Formation of the iodo-derivatives of substituted cyanoacet and acetoacetamide. *J. Indian chem. Soc.* **29** (9) 709-710, 1952.

617. BHATTACHARYYA, K. C., Formation and reaction of $\beta\beta$ -disubstituted α -keto-glutaric acids. (Lett.) *Cur. Sci.* **21** (11) 312-313, 1952.

618. GHOSH, T. N. & BASU, U. P., Attempts to synthesise β lactans. *J. Indian chem. Soc.* **29** (10) 805-809, 1952.

619. GUHA, J. R. & GUHA, P. C., Some 2-Benzothiazolyl biguanides as possible anti-malarials. (Lett.) *Cur. Sci.* **21** (12) 340-341, 1952.

620. GUHA, J. R., GUHA, S. S., ROY, A. C. & GUHA, P. C., Some guanido-arsenicals as possible anti-malarials. (Lett.) *Cur. Sci.* **21** (9) 247-248, 1952.

621. GUHA, S. S. & GUHA, P. C., Studies in synthetic antimalarials : Pt. XVII—Some substituted biguanido-thioureas and triguanides as possible anti-malarials. *J. sci. industr. Res.* **11B** (8) 319-321, 1952.

622. GUHA, S. S. & GUHA, P. C., Studies in synthetic antimalarials : Pts. XV-XVI. Pt XVII Synthesis of biguanide derivatives A new method of synthesis of biguanides. *J. sci. industr. Res.* **11B** (8) 313-316, 1952. 317-318, 1952. **11 B** (9) 374-376, 1952.

623. JOHARY, N. S., GUHA, S. S. & GUHA, P. C., Some N^1 - N^3 -disubstituted-guanidines. (Lett.) *Cur. Sci.* **21** (7) 184-186, 1952.

624. KUNDU, NAKULESWAR & RAY, PRIYADARANJAN Transformation of biguanide into dieyandiamidine. *J. Indian chem. Soc.* **29** (11) 811-822, 1952.

625. PANDYA, KANTILAL C. & PANDYA, RAJANI BALA, K., Condensations of aldehydes with malonic acid. Pt. XXV. Condensation of salicylaldehyde. *J. Indian chem. Soc.* **29** (7) 525-526, 1952.

626. PANDYA, KANTILAL C. & SINGH, RAGHU NATH, Condensation of aldehydes with malonic acid. Pt. XXVI. Condensation of p-hydroxy-benzaldehyde and its 3-chloro-, 3-bromo, 3:5 dichloro 3:5 dibromo and 3:5 di-iodo derivatives. *J. Indian chem. Soc.* **29** (9) 698-700, 1952.

627. RAY, PRIYADARANJAN & BANDOPADHYAY GURUPADA, Complex compounds of dieyandiamidine and phenyldieyandiamidine with copper, nickel, cobalt and palladium. *J. Indian chem. Soc.* **29** (11) 865-870, 1952.

628. SADASIVAN, K. & VARIER, N. S., Studies on the structure of alginic acid from the *Sargassum* sea weeds of Cape Comorin. *J. & Proc. Instn. Chem. (India)* **24** (Pt. 4) 205-212, 1952.

629. SAHASRABUDHEY, R. H. & SINGH, RANBIR, The interaction of nitrous acid with "formamidine disulphide" and its dimethyl homologue. *J. Indian chem. Soc.* **29** (8) 636-645, 1952.

630. SAHASRABUDHEY, R. H. & SHESHADRI, K. R., Further studies on Lecher's "Disulphide" from tetramethyl thiocarbamide: Constitution of "formamidine-disulphide salts". *J. Indian chem. Soc.* **29** (12) 901-906, 1952.

631. SETH, U. S. & DESHPANDE, S. S., Decomposition of diazoketones by certain reagents. *J. Indian chem. Soc.* **29** (7) 539-542, 1952.

632. SRINIVAS, K. S., GUHA, S. S. & GUHA, P. C., Substituted hydrazodicarbon-amidines. (Lett.) *Cur. Sci.* **21** (12) 341-342, 1952.

633. SULTANBAWA, M. U. S., The reactivity of substituted Vinyl halides. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 38, 1952.

634. SUB, S. N., GUHA, S. S. & GUHA, P. C., Some aryl and alkyl-sulphuryl-bis-guanidines as possible anti-malarials. (Lett.) *Cur. Sci.* **21** (10) 278-279, 1952,

547.5 CYCLIC COMPOUNDS. HOMOCYCLIC WITH SINGLE NUCLEUS

635. DAS GUPTA, S. J., 4-Acetyl amino benzaldehyde Thiosemicarbazone—T. B. I. (Lett.) *Sci. & Cult.* **18** (5) 245-246, 1952.

636. GUHA SIRCAR, S. S. & ROUT, MAHENDRA KUMAR, Preparation of antibacterials from organo-mercurials. Pt. V. Mercurated phenols. *J. Indian chem. Soc.* **29** (10) 769-772, 1952.

637. JADHAV, G. V. & DESHPANDE, V. N., The interaction of thionyl chloride and esters of aromatic hydroxy-acids and their derivatives in presence of finely divided copper. Pt. V. Interaction of methyl 5-nitro- β -resorcylate and thionyl chloride in presence of finely divided copper. *J. Indian chem. Soc.* **29** (10) 773-775, 1952.

638. JADHAV, G. V. & DESHPANDE, V. N., Interaction of thionyl chloride and esters of aromatic hydroxy-acids and their derivatives in presence of finely divided copper. Pt. VI. Interaction of methyl-2-hydroxy-3-naphthoate and thionyl chloride in presence of finely divided copper. *J. Indian chem. Soc.* **29** (10) 776-778, 1952.

639. JOHARY, N. S., GUHA, S. S. & GUHA, P. C., Preparation of 3:4 Dichloro—and 3:4:5 Trichloro-anilines. *J. Indian Inst. Sci.* **34A** (4) 287-291, 1952.

640. LIMAYE, N. S., MARATHE, S. S. (Miss) & BHIDE, B. V., Nuclear substituted alkyl sulphamides. *J. Univ. Bombay* **21A** (N. S.) (Pt. 3) (32) 42-46, 1952.

641. MARATHE, S. S. (Miss), LIMAYE, N. S. & BHIDE, B. V., Alkoxy phenyl arsonic acids. *J. Univ. Bombay* **21A** (N.S.) (Pt. 3) (32) 36-41, 1952.

642. RAMANATHAN, V. & VENKATARAMAN, K., A new method for the preparation of γ -resorecylic acid (2:6 Dihydroxybenzoic acid). (Lett.) *Cur. Sci.* **21** (10) 283, 1952.

643. SAHA, N. N. & BAGCHI, P., Synthesis of 2- β (m-methoxyphenyl) ethyl-cyclohexane 1, 3-dione. (Lett.) *Sci. & Cult.* **18** (4) 196, 1952

644. VISWANATHAN, K. V. RAGHAVAN. M. & GUHA, P. C., Metanilamide, substituted thiourea derivatives. (Lett.) *Cur. Sci.* **21** (12) 342-343, 1952.

547.6 POLYNUCLEAR HOMOCYCLIC COMPOUNDS

645. ASHRAF ALI, S., DESAI, R. D., DESAI, D. N. & SHROFF, H. P., Studies in Naphthalene series: Pt. XVI—2-Butyryl-1-naphthol & 2-Iso. butyryl-1-naphthol. *J. sci. industr. Res.* **11B** (7) 286-289, 1952.

646. CHOUBAL, V. G. & DESAI, R. D., Studies in Naphthalene series : Pt. XVII. Synthesis of Diarylamidines of 2-Hydroxy-3-naphthoic acid. *J. sci. industr. Res.* **11B** (7) 290-291, 1952.

647. DATTA, D. K. & BAGCHI, P., Synthesis of 3-Methyl-1-Naphthol. (Lett.) *Sci. & Cult.* **18** (5) 243, 1952.

CHEMISTRY

648. DUTTA, D. K. & BAGCHI, P., Synthesis of 3-Methyl-5, 6, 7, 8-Tetrahydro-1-Naphthol. (Lett.) *Sci. & Cult.* **18** (2) 95-97, 1952.

649. SHINGTE, R. D., REGE, A. V., PISHAVIKAR, D. G. & SHAH, S. V., Action of sulphur mono-chloride on naphthalene and anthracene. *J. Univ. Bombay* **21A** (N. S.) (Pt. 3) (32) 28-32, 1952.

650. SOMASEKAR RAO, A. & MUTHANNA, M. S., Synthesis of 5-ethyl azulene. (Lett.) *Cur. Sci.* **21** (11) 314, 1952.

547.7 HETERO CYCLIC COMPOUNDS IN GENERAL

651. GANAPATHI, K. & KULKARNI, K. D., Orientation in the thiazole nucleus. (Lett.) *21* (11) 314, 1952.

652. GUHA, SISIR KUMAR, A note on the constitutional formula of 2-thionaphthene-7'-(1'-methoxy) acenaphthylene-indigo. *J. Indian chem. Soc.* **29** (10) 787-788, 1952.

653. JOSHI, SHIAM SUNDER & DEORHA, DALEEP SINGH, Behaviour of chloronitrobenzenes with hydrazines and substituted hydrazines Pt. III. Some substituted 1-hydroxy-1 : 2 : 3-benzotriazoles and their acetyl derivatives. *J. Indianchem. Soc.* **29** (7) 545-548, 1952.

654. KHOSLA, M. C., VIG, O. P., GUPTA, I. S. & NARANG, K. S., Synthesis of Thiazolidino-quinazoline derivatives. (Pt. I.) (Lett.) *Sci. & Cult.* **18** (1) 43, 1952.

655. RABINDRAN, K. & TILAK, B. D., Thiophenes and Thiopyrans. Pt. VIII. A new synthesis of Dibenzothiophene and its derivatives: Its scope and limitations. *Proc. Indian Acad. Sci. (A)* **36** (5) 411-418, 1952.

656. RABINDRAN, K., SUNTHANKAR, A. V. & TILAK, B. D., A new synthesis of Thiophenes and Thiopyrans. Pt. VII. Bromothionaphthalenes and 5-Nitrothionaphthalene. *Proc. Indian Acad. Sci. (A)* **36** (5) 405-410, 1952.

547.8 HETERO CYCLIC COMPOUNDS WITH RINGS OF SIX OR MORE ATOMS

657. AGHORAMURTHY, K. & SESHADRI, T. R., A convenient synthesis of Scopoletin. *J. sci. industr. Res.* **11B** (10) 411-413, 1952.

658. BANGDIWALA, B. P. & DESAI, C. M., 4-Hydroxy 2 : 5 Dimethyl quinoline and 4-hydroxy 2-methyl 5-chloro-quinoline. *Cur. Sci.* **21** (9) 256, 1952.

659. BANERJEE, N. R. & SESHADRI, T. R., Synthetic experiments in the benzopyrone series. Pt. XVIII. Use of N-Bromo-Succinimide for the synthesis of flavones. *Proc. Indian Acad. Sci. (A)* **36** (2) 134-140, 1952.

660. BASU, U. P. & SEN, A. K., Preparation of 2 : 4-Diamino-1-p-chlorophenyl-1 : 6-Dihydro-6 : 6-Dimethyl-1 : 3 : 5-Triazine. *J. sci. industr. Res.* **11B** (7) 312, 1952.

661. BASU, U. P., SEN, A. K. & GANGULY, A. K., Triazines from sulfa compounds. (Lett.) *Sci. & Cult.* **18** (1) 45-46, 1952.

662. DAS GUPTA, S. J., Modification of Skraup's reaction. *J. Indian chem. Soc.* **29** (9) 711-712, 1952.

663. DASS, RAMJI, VIG, O. P. GUPTA, I. S. & NARANG, K. S. Studies in antimalarials: Quinazoline series-Pt. I. *J. sci. industr. Res.* **11B** (11) 461-463, 1952.

664. DESAI, R. D. & MARBALLI, M. S. Heterocyclic compounds: Pt. XXIV.-Coumarins from Arylamides of α -Resorecylic acid. *J. sci. industr. Res.* **11B** (7) 292-294, 1952.

665. DUTTA, N. L. & BOSE, J. L., Isoflavones: Pt. I.-Some nitroisoflavones. *J. sci. industr. Res.* **11B** (10) 413-415, 1952.

666. JAIN, A. C., SESHADRI, T. R. & THIRUVENGADAM, T. R., Nuclear oxidation in flavones and related compounds. Pt. XL. Study of Morin and Datisectin derivatives. *Proc. Indian Acad. Sci. (A)* **36** (3) 217-229, 1952.

667. KARMARKAR, S. S., SHAH, K. H. & VENKATARAMAN, K., Synthetical experiments in the chromone group. Pt. XXVI. Synthesis of 5:7:2'-Trihydroxy isoflavone, 5:7:2'-Trihydroxy-3-methyl-isoflavone and 5-Hydroxyisoflavone. *Proc. Indian Acad. Sci. (A)* **36** (6) 552-558, 1952.

668. MARATHEY, M. G., Experiments in the benzopyrone series. Pt. I. Formation of benzylidene coumarones. *J. Univ. Poona (Chem. Sect.)* **1** (2) 7-10, 1952.

669. MARATHEY, M. G., Experiments in the benzopyrone series. Pt. III. Synthesis of flavones and benzylidene coumarones. *J. Univ. Poona (Chem. Sect.)* **1** (2) 19-24, 1952.

670. MIRZA, RAFAT, Preservation of lactone ring with lithium aluminium hydride. (Lett) *Cur. Sci.* **21** (7) 195, 1952.

671. MIRZA, RAFAT, Reduction of 3-Methyl-4-Quinazolone with lithium aluminium hydride. (Lett) *Sci. & Cult.* **17** (12) 530-531, 1952.

672. NAIK, R. M., & SETHNA SURESH, Bromination of 7-hydroxy and 5-hydroxy-2-methylchromone. *J. Indian chem. Soc.* **29** (7) 492-498, 1952.

673. NAIK, R. M. & THAKOR, V. M., Formylation of some hydroxycoumarin derivatives. (Lett.) *Cur. Sci.* **21** (12) 349-350, 1952.

674. NARASIMHACHARI, N. RAJAGOPALAN, D. & SESHADRI, T. R., A new effect of hydrogen bond formation (chelation) Pt-IV. Abnormal behaviour of 2'-hydroxy-flavonones. *Proc. Indian Acad. Sci.* **36A** (4) 231-243, 1952.

675. NARASIMHACHARI, N., SESHADRI, T. R. & SETHURAMAN, S., Synthetic experiments in the benzopyrone series. Pt. XIX. Methyl ethers of genistein. *Proc. Indian Acad. Sci.* **36A** (3) 194-200, 1952.

676. PANKAJAMANI, K. S. & SESHADRI, T. R., Survey of Anthoxanthins. Pt. I. *Proc. Indian Acad. Sci.* **36A** (3) 157-169, 1952.

677. SAHA, N. N. DUTTA, P. K. & MUKHERJI, S. M., A new route to *Iso*-quinoline derivatives. (Lett.) *Sci. & Cult.* **18** (3) 152-153, 1952.

678. SEHGAL, J. M. & SESHADRI, T. R., Nuclear oxidation in flavones and related compounds. Pt. XLI. A study of 2':5'-Hydroxy-flavonols. *Proc. Indian Acad. Sci.* **36A** (5) 355-362, 1952.

679. SEN, ACHINTYA KAMAL, RAY, N. K. & BASU, U. P., Synthesis of 8-Aminoquinolines. Pt. III & IV. *J. sci. industr. Res.* **11B** (8) 322-323; 1952: 324-325, 1952.

680. SEN, ACHINTYA KAMAL, RAYCHAUDHURI, AMITABHA & BASU, U. P., Synthesis of 8 Aminoquinolines. Pt. V. *J. sci. industr. Res.* **11B** (8) 325-327, 1952.

681. SEN, A. B. & KAKAJI, T. N., Kostanecki-Robinson acylation. Pt-II. Studies in 5-alkyl-2-hydroxyphenone series. *J. Indian chem. Soc.* **29** (12) 950-954, 1952.

682. SINGH, GURBAKSH., SINGH, SURJIT, SINGH, APAR & SINGH, MAHAN, Synthesis in the acridine series. Pt. VIII. N. substituted-3-methoxy-5-chloro-9-aminoacridines. *J. Indian chem. Soc.* **29** (10) 783-786, 1952.

683. SUNDARA RANJAN, N. S., A short review of the chemistry of coumarin-3 ones. *J. Madras Univ.* **22B** (1) 129-146, 1952.

684. VENKATA RAO, G. & SESHADRI, T. R., A note on the biogenesis of Pedicin. *Proc. Indian Acad. Sci.* **36A** (2) 130-133, 1952.

547.9 NATURAL SUBSTANCES

SUBSTANTIALLY ALIPHATIC COMPOUNDS

685. BHATI, A., Synthesis of cryptone (Lett.) *Cur. Sci.* **21** (11) 314-315, 1952.

686. DHINGRA, D. R. & DHINGRA, S. N., Chemical study of the seed kernels of *Prunus communis* var. *institia* Linn. *Indian Soap J.* **18** (6) 187-191, 1952.

687. GHATGE, N. D. D. & SHAH, N. M., Isolation of saponin from the seeds of *Albizzia lebbeck*. (Lett.) *Cur. Sci.* **21** (7) 192, 1952.

688. GUPTA, S. C. SHARMA, V. N. & AGGARWAL, J. S., Chemical examination of the seeds of *Mallotus philippensis* Muell Arg. (*Kamala*). II. Constitution of the unsaturated hydroxy acid isolated from the oil. *J. sci. industr. Res.* **11B** (11) 463-468, 1952.

689. KRISHNA RAO, G. S., DEV, SUKH & GUHA, P. C., Studies in sesquiterpenes. Pt. VIII. Sesquiterpenes of the essential oil from *Dipterocarpus indicus* Bedd. *J. Indian chem. Soc.* **29** (8) 589-597, 1952.

690. KRISHNA RAO, G. S. DEV SUKH & GUHA, P. C., Studies in sesquiterpenes. Pt. IX. The maleic anhydride adduct of m. p. 180-182 obtained from the essential oil of *Dipterocarpus indicus*. *J. Indian chem. Soc.* **29** (8) 598-603, 1952.

691. KRISHNA RAO, G. S. DEV. SUKH & GUHA, P. C., Studies in sesquiterpenes. Pt. XII. Sesquiterpenes of the oil from the wood of the Himalayan Deodhar. *J. Indian Chem. Soc.* **29** (10) 721-730, 1952.

692. MATHUR, G. P. & MUKHERJEE, S., Investigations on the structure of *Ketha* (*Feronia Elephantum*: Family Rutaceae) gum. (Lett) *J. sci. industr. Res.* **11B** (12) 544-545, 1952.

693. MITRA, S. P. Isolation of abietic acid from rosin. *Proc. nat. Acad. Sci. (India)* **21 A** (Pt. I) 1-10, 1952.

694. NAIR, G. V., POTI, A. N. & PILLAY, P. P. The constituents of lacquer-bearing trees of Travancore-Cochin: Pt. I. Chemical examination of the constituents of *Holigarna arnottiana* Hook. F., *J. sci. industr. Res.* **11 B** (7) 294-297, 1952.

695. NAIR, G. V., POTI, A. N. & PILLAY, P. P., The constituents of lacquer-bearing trees of Travancore-Cochin. Pt. II. Chemical examination of the latex of *Semecarpus travancoriana* Bed. *J. sci. industr. Res.* **11 B** (7) 298-299, 1952.

696. PUNTAMBEKAR, S. V. & BATRA, P. C., Chemical examination of the fatty oil from the seeds of *Sterculia urens*. Roxb. *Proc. Indian Acad. Sci.* **36A** (4) 284-288, 1952.

697. RAO, P. S. & GAKHAR, K. L., Studies on tuber hemicellulose. Pt. II. Hemicelluloses from the tubers of *Asparagus racemosus* and their complete and partial hydrolysis. *Proc. Indian Acad. Sci.* **36 A** (1) 70-74, 1952.

698. RAO, P. S. & BERI, R. M., Starch from the tubers of *Dioscorea bulbifera* Linn. (Lett.) *Sci & Cult.* **18** (1) 41-42, 1952.

699. RAZDAN, R. K. & BHATTACHARYA, S. C., Sesquiterpenes from *Piper cubeba* Linn. (Lett.) *Sci. & Cult.* **18** (3) 148-149, 1952.

700. SOMASEKAR RAO, A., DUTTA K. B. Dev, SUKH & GUHA P. C., Studies in sesquiterpenes. Pt. XI. Sesquiterpenes of the essential oil of *Lansium annamalayanum* Bedd. Structure of α -Chigadmarene. *J. Indian chem. Soc.* **29** (8) 620-625, 1952.

701. SOMASEKAR RAO, A., DUTTA, K. B. Dev, SUKH, & GUHA, P. C., Studies in sesquiterpenes. Pt. X. Sesquiterpenes of the essential oil of *Lansium annamalayanum* Bedd. *J. Indian chem. Soc.* **29** (8) 604-607, 1952.

702. SUBBARAM, M. R., Glyceride composition of the seed fat of *Cerbera odollam* Gaertn. *J. Madras Univ.* **22 B** (2) 223-233, 1952.

703. TALUKDAR, PURNENDU BIKASH & MUKHERJI, S. M., Synthesis of α -Terpinene. (Lett.) *Sci & Cult.* **18** (3) 150, 1952.

704. VARSHNEY, I. P. & FAROOQ, M. O., Isolation of a new saponin and sapogenin, albizziagenin from *Albizzia lebbeck*, Benth. (Lett.) *Cur. Sci.* **21** (9) 255, 1952.

PROTEINS

705. SIVA SANKER, D. V. Proteins and other nitrogenous constituents of the castor seed. Pt. IV. Interactions of the castor seed globulin with salts. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 144-154, 1952.

706. SIVA SANKER, D. V., Proteins and non-protein nitrogenous constituents of the castor seed. Pt V. Studies on the homogeneity of the castor seed globulin. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 155-162, 1952.

ALKALOIDS

707. BASU, N. K. & GODE, K., Chemical investigations of *Asteracantha longifolia* Nees. *Indian J. Pharm.* **14** (11) 212-213, 1952.

708. BHATTACHARYA, ANIL, Kopsine, an alkaloid of *Kopsia albiflora* L. (Lett.) *Sci. & Cult.* **18** (6) 293-294, 1952.

709. BOSE, SUKUMAR, Rauwolfine: the new alkaloid of the root of *Rauwolfia serpentina* Benth. (Lett.) *Sci. & Cult.* **18** (2) 98, 1952.

710. CHATTERJEE, R. and CHAKRABARTI, S. C., Structures of Epipodophyllotoxin and Epipicropodophyllin. (Lett.) *Sci. and Cult.* **18** (4) 197-199, 1952.

711. CHATTERJEE, R., GUHA, M. P. & DAS-GUPTA, A. K., Plant alkaloids. Pt. IV. *Berberis himalaica* Ahrendt and *B. tinctoria* Leschenault. *J. Indian chem. Soc.* **29** (12) 921-924, 1952.

712. CHAUDHRY, G. R., SHARMA, V. N. & DHAR, M. L., The alkaloids of *Stephania glabra* Miers—Identity of Gindarine and gindarinine with tetrahydro-palmatine and palmatine respectively. *J. sci. industr. Res.* **11B** (8) 337-339, 1952.

713. HANNA, K. L. & CHANNA, ONKAR NATH, Chemical investigation of *Physochlaina praealta*: Pt. III. (Lett.) *J. sci. industr. Res.* **11B** (11) 505, 1952.

714. KARTHA, A. R. S. & MENON, K. N., Examination of the root bark of *Tabernaemontana crispa* (Dicotoma) (Lett.) *Cur. Sci.* **21** (11) 315-316, 1952.

715. LALA, S. D. & SEN GUPTA, I., Experiments on the constituents of Chaksine, the alkaloid from the seeds of *Cassia absus*. Linn. Pt. I. *Res. Bull. East Punjab Univ.* No. 21, 95-98, 1952.

716. SAWHNEY, P. L. & SESHADRI, T. R., Alkaloid from *Coptis teeta* Wall. (Lett.) *J. sci. industr. Res.* **11B** (7) 308-309, 1952.

717. SUBBARATNAM, A. V., Alkaloidal constituents of *Gloriosa superba* Linn. *J. sci. industr. Res.* **11B** (10) 446-447, 1952.

NATURAL COLORING MATTER ETC.

718. ACHARYA, B. N. & MALPOORWALA, B. G., Studies in carotenoids. Pt. I. Carotene content of greens. *J. Univ. Bombay.* **21A** (N. S.) (Pt 3) (32) 47-52, 1952.

719. ACHARYA, B. N. & MALPOORWALA, B. G., Studies in carotenoids. Pt. II. Stability of crystalline carotene and carotene in green leafy vegetables under different conditions. *J. Univ. Bombay* **21** (N. S.) (Pt3) (32) 53-59, 1952.

720. ACHARYA, B. N. & MALPOORWALA, W. G., Studies in carotenoids. Pt. III. Storage of Vitamin A acetate, crystalline carotene and carotene from edible green leafy vegetables in the liver of the rat. *J. Univ. Bombay.* **21A** (N. S.) (Pt. 3) (32) 60-68, 1952.

721. NATARAJAN, C. P. & MACKINNEY, G., Carotenoid pigments of orange juice. *J. sci. industr. Res.* **11B** (10) 416-418, 1952.

722. SRINIVASAN, K. R., The colouring matter in turmeric. (Lett.) *Cur. Sci.* **21** (11) 311-312, 1952.

TANNIN

723. DAS, B. M. & NAYUDAMMA, Y., The chemistry of tanning. *Souvenir Instn. Ch m. India* 176-187, 1952.

CHEMISTRY

724. HANUMANTHA RAO, P., Extraction of tannins from Avaram barks. (*Cassia auriculata*) *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 137-147, 1952.

725. HANUMANTHA RAO, P., A note on the extraction of tannins by nonaqueous solvents by methyl alcohol from myrobalans and divi-divi. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 182, 1952.

726. HANUMANTHA RAO, A note on the preservation of divi-divi extracts by p-nitrophenols. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 181, 1952.

727. HANUMANTHA RAO, P., Iron wood of Malabar as tanning material. (*Lett. Sci. & Cult.*) **18** (5) 243, 1952.

728. HANUMANTHA RAO, P., A note on wattles. (*Lett. Sci. & Cult.*) **18** (2) 92-94, 1952.

729. RAMACHANDRA RAO, & PUNTAMBEKAR, S. V. A note on Karada bark tannins. *Indian Forester* **78** (11) 582-583, 1952.

730. SARKAR, P. K., Chemistry of oil tannage. *Tanner* **7** (3) 23-24, 1952.

LICHENS

731. MITTAL, O. P. NEELAKANTANS, & SESHADRI, T. R., Chemical investigations of Indian lichens. Pt XIV. Chemical components of *Ramalina calicaris* and *Ramalina sinensis*. *J. sci. industr. Res.* **11B** (9) 386-387, 1952.

732. NEELAKANTAN, S. & SESHADRI, T. R., Chemical investigations of Indian lichens. *J. sci. industr. Res.* **11A** (8) 338-340, 1952.

548 CRYSTALLOGRAPHY

733. BASAK, B. S. & DAS-GUPTA, D. R., An X-ray study of Andrographis crystal. *Indian J. Phys.* **26** (11) 539-542, 1952.

734. CHANDRASEKHARAN, V., Thermal scattering of light in cubic crystals. *J. Indian Inst. Sci. (A)* **34A** (4) 269-286, 1952.

735. DATTA, M. N., Studies on the sharp extra reflections from phloroglucine dihydrate crystals. Pt. III. Effect of temperature. *Indian J. Phys.* **26** (9) 452-454, 1952.

736. DATTA, M. N., Study of diffuse X-ray reflection by a single crystal of Meta aminophenol. *Indian J. Phys.* **26** (7) 371-375, 1952.

737. KARTHA, GOPINATH, Structure of halogenates of the type $A (BO_3)_2 \cdot H_2O$. I. Barium chlorate monohydrate $Ba (ClO_3)_2 \cdot H_2O$. *Proc. Indian Acad. Sci.* **36** (6) 501-529, 1952.

738. RAMCHANDRA RAO, S. & LEELA, M., Crystal magnetism of ruby and sapphire. *J. Mysore Univ. (N. S.) (B)* **13** (1) 25-37, 1952.

739. RAMCHANDRAN, G. N., The Poincaré sphere and Stokes parameters. *J. Madras Univ.* **22B** (2) 277-287, 1952.

740. VISWANATHAN, K. S., The characteristic vibrations of a rectangular lattice. *Proc. Indian Acad. Sci. (A)* **36** (4) 306-314, 1952.

549 MINERALOGY

cf. also 821, 866.

741. CHATTERJEE, N. N., & MUKHERJEE, SAILEN-KUMAR, Study of sulphidic ore minerals from Ghatsila, Singhbhum, by the contact print method. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 47-53, 1952.

742. DUTTA ROY, R. K., CHATTERJEE, P. K. & SEN, B. N., Studies of a sample of Lepidolite from the Baster district, C. P. *Quart. J. min. & metallur. Soc. India* **23** (4) 183-184, 1951.

743. GUNDU RAO, C., Authigenic tourmaline from the Satyadeva stage (Upper Gondwanas) near Madras. (Lett.) *Cur. Sci.* **21** (12) 336-337, 1952.

744. PICHAMUTHU, C. S., Non-pleochroic acmite from the Bababudan hill, Mysore. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 55-60, 1952.

745. RENGACHARI, S. & SRIKANTAN, B. S., A note on Marcasite from Neyveli (South Arcot). (Lett.) *Sci. & Cult.* **18** (6) 291-292, 1952.

746. VENKATESH, V., Stellate twinning in cordierite. (Lett.) *Cur. Sci.* **21** (7) 183-184, 1952.

747. WEST, W. D., A note on the pyroxenes of the Deccan trap. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 153-157, 1952.

55 GEOLOGY. METEOROLOGY

GENERAL

748. DIRECTOR, GEOLOGICAL SURVEY OF INDIA, Field programme of the Geological Survey of India for the year 1951-52. *Indian Miner.* **5** (4) 183-188, 1951.

749. Cumulative list of papers published in the quarterly journal up to Vol. XXII, 1950. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 189-207, 1952.

55(1) REGIONAL GEOLOGY

750. BHATTACHARYA, A. K., Geology of the area in the neighbourhood of Ghatsila, Singhbhum district, Bihar. *Quart. J. geol. min. & metallur. Soc. India* **23** (4) 147-157, 1951.

751. DUTT, N. V. B. S., Geology of parts of Kurnool and Cuddapah District, Madras Presidency. *Madras G. O. No. 3776*, 1-9, 1952.

752. KRISHNAN, M. S., Geological history of Rajasthan and its relation to present day conditions. *Bull. nat. Inst. Sci. India* **1**, 19-31, 1952.

753. RAO, M. S., Progress report for the field season, 1949-50. Pt. A : The geology of parts of Palnad and Sattanapalle taluks, Guntur District. Pt. B. A note on the copper occurrences near Agnigudala, Guntur District. *Madras G. O. No. 734*, 1-5, dt. 26-2-1952.

754. SPATE, O. H. K., A suggested regional division of the Indian subcontinent. *Indian geogr. J.* **26** (1&2) 1-14, 1952.

755. SUKHESWALA, R. N., Geological landmarks in Bombay and Salsette. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 297-299, 1952.

756. UMAMAHESWARA RAO, G. V., Geology of the Karemudi area with special reference to the stratigraphy of the Palnads. *Quart. J. geol. min. & metallur. Soc. India* **23** (4) 159-167, 1951.

505 COLLATERAL SCIENCES. METHODS

550.3 GEOPHYSICS

757. DAS, A. K., Solar noise burst on 11 April, 1952, and associated ionospheric and magnetic disturbance. (Lett.). *Indian J. Met. & Geophys.* **3** (3) 236, 1952.

758. MUKHERJEE, S. M., Landslides and sounds due to earthquakes in relation to the Upper atmosphere. *Indian J. Met. & Geophys.* **3** (4) 240-257, 1952.

759. PRAMANIK, S. K. & YEGNA NARAYAN, S., Diurnal magnetic variation in equatorial regions. *Indian J. Met. & Geophys.* **3** (3) 212-216, 1952.

760. RAMACHANDRA RAO, M. B., Symposium on the Assam Earthquake of August 15, 1950. *Indian J. Met. & Geophys.* **3** (4) 258-263, 1952.

761. SIVARAMAKRISHNAN, M. V., Recurrence feature of some of the great magnetic storms recorded at Kodaikanal (1949-1951). (Lett.). *Indian J. Met. & Geophys.* **3** (3) 231-235, 1952.

762. Need for a Central Geophysical Institute. (editorial). *Sci. & Cult.* **18** (3) 103-106, 1952.

550.4 GEOCHEMISTRY

763. AUDEN, J. B., Some geological and chemical aspects of the Rajasthan salt problem. *Bull. nat. Inst. Sci. India* **1**, 53-67, 1952.

550.8 APPLIED AND PRACTICAL GEOLOGY

cf. also 2201

764. DUTTA, K. K., Subsurface exploration at dam sites. *Indian Miner* **6** (1) 32-36, 1953.

765. RAMACHANDRA RAO, M. B. & NEGI, B. S., Geophysical exploration in the arid tracts of Rajputana. *Bull. nat. Inst. Sci. India* **1**, 70-75, 1952.

766. RAMACHANDRA RAO, M. B., Aero-magnetic surveys at explore for oil. *Indian Miner.* **5** (4) 163-167, 1951.

551 GENERAL AND HISTORICAL GEOLOGY

551.4 PHYSICAL GEOGRAPHY. GEOMORPHOLOGY

cf. also 2307, 2409

767. CHATERJI, G. C., Geological note on water supply, Gaya and Dheoghar. *Irrig. & Powr J.* **9** (3) 474-477, 1952.

768. CHHIBBER, H. L., The age, origin and classification of the rivers of India. *Bull. nat. geogr. Soc. India, Banaras*. No. 1, 1-9, 1952.

769. CHHIBBER, H. L. The reclamation of the ravine lands of the Yamuna (Jumna), Uttar Pradesh. *Bull. nat. geogr. Soc. India Banaras* No. 2, 1-6, 1952.

770. DHIR, R. D., The hydrological balance and the influence of utilization of groundwater upon it. *Irrig. & Power. J.* **9** (3) 433-437, 1952.

771. DHIR, R. D., & KRISHNAMURTHY, K. V., Development of arid zones of in India. *Irrig. & Powr. J.* **9** (2) 205-209, 1952.

772. DHIR, R. D. & KRISHNAMURTHY, K. V., The hydrology of the Rajasthan desert. *Bull. nat. Inst. Sci. India* **1**, 211-216, 1952.

773. DUTT, P. K., A projected profile study of the Ranchi plateau. *Indian geogr. J.* **26** (1&2) 15-18, 1952.

774. GANGULI, B. N., The economics of desert control. *Bull. nat. Inst. Sci. India* **1**, 273-276, 1952.

775. GULATEE, B. L., Heights of Himalayan snow-peaks. *Indian J. Met. & Geophys.* **3** (3) 165-172, 1952.

776. HORA, S. L., The Rajputana desert: Its value in India's national economy. *Bull. nat. Inst. Sci. India* **1**, 1-11, 1952.

777. KHOLSA, A. N., Inter-relation of surface and ground water with special reference to arid zones. *Irrig. & Powr. J.* **9** (3) 402-411, 1952.

778. KREBS, NORBERT., The boundaries of the tropics. *Indian geogr. J.* **27** (3&4) 33-38, 1952.

779. KRISHNAMURTHY, K. V., The creep of the desert. *Bull. nat. Inst. Sci. India* **1**, 131-136, 1952.

780. KRISHNAMURTHY, K. V. & SINGH, RANDHIR, Hydrology of semi-arid areas in Peninsular India. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (13) 23-33, 1952.

781. LIMAYE, D. G., Ground water resources of Coorg. *J. Univ. Poona* **1** (2) 21-36, 1952.

782. MITRA, P. C., Conditions of Rajputana in the past and present and its development. *Bull. nat. Inst. Sci. India* **1**, 51-52, 1952.

783. PITHAWALLA, M. B., The great Indian desert, a geographical study. *Bull. nat. Inst. Sci. India*, **1**, 137-151, 1952.

784. PRAMANIK, S. K., Hydrology of the Rajasthan desert : Rainfall, humidity and evaporation. *Bull. nat. Inst. Sci. India*, **1**, 183-197, 1952.

785. RAMDAS, L. A., Desert hydrology : Condensation and evaporation phenomena in the Rajasthan desert. *Bull. nat. Inst. Sci. India*, **1**, 198-210, 1952.

786. RANDHAWA, M. S., Progressive desiccation of Northern Indian in historical times. *Indian For.* **78** (10) 497-505, 1952.

787. RANDHAWA, M. S., Desiccation of Central Asia and invasions of India. *Everyday Sci.* **1** (1) 41-43, 1952.

788. SETHI, R. L., The geographical distribution of food crops in India and the measures adopted to meet the food deficit. *Bull. nat. geogr. Soc. India Banaras*, No. 17, 1-17, 1952.

789. SINGH, GAMBHIR, The Rajputana desert. geography. *Bull. nat. Inst. Sci. India* **1**, 151-152, 1952.

790. TAYLOR, GEORGE C., The occurrence of ground water in rocks of Western Rajasthan. *Bull. nat. Inst. Sci. India* **1**, 217-221, 1952.

791. THIRUNARANAN, B. M., The Alliluli or 'Ali-coor' caves. *Indian geogr. J.* **27** (304) 64-66, 1952.

792. VENKATARAMANAN, K., Ground water in India. *Irrig. & Powr. J.* **9** (2) 294-303, 1952.

551.5 METEOROLOGY. ATMOSPHERE

793. AGARWALA, K. S., Fluctuations of annual rainfall in Central India (1872-1947). (Lett.) *Indian J. Met. & Geophys.* **3** (3) 229-231, 1952.

794. BANERJI, S. K., Weather factors in the creation and maintenance of the Rajputana desert. *Bull. nat. Inst. Sci. India*, **1**, 153-166, 1952.

795. BASU, S. C., Fog forecasting over Calcutta and neighbourhood. *Indian J. Met. & Geophys.* **3** (4) 281-289, 1952.

796. DAS, P. K., Monsoon depressions in the Bay of Bengal. (Lett.) *Indian J. Met. & Geophys.* **3** (3) 225-229, 1952.

797. KRISHNA RAO, D., A note on the comparative study of the radiosonde ascents over Bombay and Poona during the monsoon season of 1950. (Lett.) *Indian J. Met. & Geophys.* **3** (4) 300-302, 1952.

798. KRISHNA RAO, P. R., Some high sounding balloon ascents and upper air temperatures upto 35 km over India. *Indian J. Met. & Geophys.* **3** (3) 173-185, 1952.

799. MALURKAR, S. L., A reply to "Some aspects of tropical meteorology with special reference to the Indian weather—An examination of Malurkar's concepts regarding them". (Lett.) *Indian J. Met. & Geophys.* **3** (4) 303-307, 1952.

800. MANI, ANNA, A bucket for the measurement of sea surface temperature. *Indian J. Met. & Geophys.* **3** (4) 278-280, 1952.

801. MITRA, S. N., Winds in the ionosphere. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr.)* 17, 1952.

802. PARTHASARATHY, S. & NARAYANAN, J., The diurnal variation of upper winds over Bombay and Poona. *Indian J. Met. & Geophys.* **3** (3) 197-203, 1952.

803. PRAMANIK, S. K. & HARIHARAN, P. S., The climate of Rajasthan. *Bull. nat. Inst. Sci. India* **1**, 167-178, 1952.

804. PRAMANIK, S. K. & RAO, K. N. Hydrometeorology of the Damodar catchment. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr.)* 55-56, 1952.

805. PRAMANIK, S. K. & VEGNARAIN, S., Diurnal magnetic variation in equatorial regions. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr.)* 5, 1952.

806. PUTTASWAMY, H. S., Meteorological observations applied to agriculture. *Mysore agric. J.* **29** (3) 52-53, 1952.

807. RAMAKRISHNAN, S. S., Recent studies on the hourly variation of evaporation at the Central Agricultural Meteorological Observatory at Poona. *Irrig. & Powr J.* **9** (4) 547-556, 1952.

808. RAMANATHAN, K. R., Atmospheric conditions over the Rajputana desert. *Bull. nat. Inst. Sci. India* **1**, 179-182, 1952.

809. RAMASWAMY, K. R. & BALASUBRAMANIAN, C., Rainfall in the Ceded districts. *Madras agric. J.* **39** (8) 447-454, 1952.

810. RANGARAJAN, S., Fog at Santacruz airport. *Indian J. Met. & Geophys.* **3** (3) 186-196, 1952.

811. SAHA, K. R., The latitudinal oscillation of a barometric trough and associated weather over Bengal during the Indian summer. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr.)* 3-4, 1952.

812. SAHA, K. R., On the distribution of weather over Bengal on any day during the premonsoon season as related to the position and movement of a barometric trough. *Indian J. Phys.* **26** (7) 357-370, 1952.

813. SELVARATNAM, D. N. & CHINNAPPA, J. C. V., Evaporation of sea water in salterns by solar radiation. —I. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 19, 1952.

814. SEN, S. N. & GEORGE, C. A., An analysis of the Masulipatam cyclone of October, 1949. *Indian J. Met. & Geophys.* **3** (4) 264-277, 1952.

815. SIVARAMAKRISHNAN, M. V., Solar geomagnetic relationship from a study of Kodaikanal records (1949-1951). *Proc. 39th Indian Sci. Congr. Pt. IV (abstr.)* 4-5, 1952.

816. VENKITESHWARAN, S. P., Measurement of wind for a wind power survey in India. *J. sci. industr. Res.* **11A** (10) 442-451, 1952.

817. VENKITESHWARAN, S. P. & JAYARAJAN, A. P., Observations of turbulence in the upper air with F-type radiosonde. *Indian J. Met. & Geophys.* **3** (3) 203-211, 1952.

551.7 STRATIGRAPHY

cf. also 831

818. DEV, A. K., Problems of archaean geology in India. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 39-42, 1952.

819. DUBEY, V. S. & CHAUDHARY, M. S., Late pre-Cambrian glaciation in Central India. *Cur. Sci.* **21** (12) 331-332, 1952.

820. GHOSH, A. M. N. & BANERJEE, T., Post-Jurassic diastrophic cycles in Assam. *Quart. J. geol. min. & metall. Soc. India* **24** (1-4) 159-163, 1952.

821. MAHADEVAN, C. & SRIRAMA DAS, A., A heavy mineral correlation of the sedimentaries of parts of Visakhapatnam and east Godavari district. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 115-124, 1952.

822. RAMA RAO, L., Scope for foraminiferal research in the Cretaceous rocks of South India. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 165-168, 1952.

823. SAXENA, SHIVDAYAL, Correlation of the Gondwanas based on the evidence of plant fossils. *Agra Univ. J. Res. (Sci.)* **1**, 1-14, 1952.

824. SINGH, SUKHBIR, On the Laki beds in Dharmpur Subathu region, Simla hills. (Lett.) *Cur. Sci.* **21** (12) 335-336, 1952.

825. TEWARI, B. S., The Tertiary beds of Vinjhani area, South Western Cutch, India. *Cur. Sci.* **21** (8) 217-218, 1952.

826. HORA, S. L. & MATHUR, B. B. L., On certain palaeogeographical features of Rajasthan as evidenced by the distribution of fishes. *Bull. nat. Inst. Sci. India*, **1**, 32-36, 1952.

827. BAGCHI, T. C., On the possible origin of the porphyroblastic granite and charnockites in Birmaharajpur sub-division, Bolangir, Patna district, Orissa. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 83-87, 1952.

828. CHAKRAPANI NAIDU, M. G., Occurrence of Ferrorichterite in the Chikkalavanchi area, Kolar district. (Mysore State). *J. Mysore Univ. (N. S.)* **(B) 13** (1) 9-13, 1952.

829. CHATTERJEE, N. N., X-ray study and coal cleaning. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 33-37, 1952.

830. CHHIBBER, V. N., The geology and petrology of the basic intrusive rocks near Bheraghat, Madhya Pradesh. *J. sci. Res. Banaras Hindu Univ. II*, 158-170, 1951-52.

831. GODBOLE, R. D. & THAKAR, B. G., Archaean rocks occurring around Muddebihal and Nalatwad, Bijapur district, Bombay. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 89-104, 1952.

832. JACOB, K., SASTRY, M. V. A. & SASTRI, V. V., A note on the microfossils of the impure gypsum from the Jamsar mine, Bikaner and on the possible origin of the gypsum. *Bull. nat. Inst. Sci. India*, **1**, 68-69, 1952.

833. KAR, PRITHWISH & SARKAR, UDAY NARAYAN, Petrogeometric interpretation of a crushed conglomerate from Rangamatia, Singhbhum district, Bihar. *Cur. Sci.* **21** (9) 237-238, 1952.

834. KELKAR, K. V. & GHODKE, S. S., On a crush conglomerate in South Ratnagiri district. *J. Univ. Poona (Geol. Sect.)* **1** (2) 1-7, 1952.

835. KHARKWAL, A. D., A study of the gneissose granites and associated metamorphic rocks of Lohaghat, Almora district. *Quart. J. geol. min. & metallur. Soc. India* **23** (4) 135-146, 1951.

551.8 PALAEOGEOGRAPHY

826. HORA, S. L. & MATHUR, B. B. L., On certain palaeogeographical features of Rajasthan as evidenced by the distribution of fishes. *Bull. nat. Inst. Sci. India*, **1**, 32-36, 1952.

552 PETROLOGY. PETROGRAPHY

cf. also 808.

827. BAGCHI, T. C., On the possible origin of the porphyroblastic granite and charnockites in Birmaharajpur sub-division, Bolangir, Patna district, Orissa. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 83-87, 1952.

836. MISRA, R. C. & SINGH, T., Tourmalinisation of schistose rocks at the Tilaiya dam site (Barakeri river, Hazaribagh district, Bihar) and development of pleochroic haloes. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 1-5) 1-5, 1952.

837. MUTHUSWAMI, T. N., Niggli's principles of igneous petrogenesis. *Proc. Indian Acad. Sci. (A)* **36** (1) 1-40, 1952.

838. NAIDU, M. G. C., Piedmontite from the Champion gneiss near Robertsonpet, Kolar (Mysore State). (Lett.) *Cur. Sci.* **21** (9) 243, 1952.

839. OJHA, D. N., A new meteorite from Madhipura, Bihar. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 169-171, 1952.

840. PODDAR, M. C., Note on the columnar structure of a sandstone of Bhuj. (Middle Cretaceous) age, Kutch. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 71-73, 1952.

841. SADASHIVAIAH, M. S., Petrology of the dolerite dykes of the Jharia coalfield and the Kodarma mica-field. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 105-114, 1952.

842. SAHA, AJIT KUMAR, On Porphyry dykes near Dalsara, Mayurbhanj. (Lett.) *Sci. & Cult.* **18** (5) 250-253, 1952.

843. SEN, J. & RAYCHAUDHURI, S., On the calc-magnesian metamorphites and associated amphibolites of Baghraybari—Pahargora, North Manbhum. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 141-152, 1952.

844. SEN, SAURINDRANATH, Origin of the alkaline rocks of Kishgarh Rajasthan. (Lett.) *Cur. Sci.* **21** (9) 242-243, 1952.

845. SHARMA, N. L. & SUBRAHMANYAM, N. V. T., A preliminary note on the petrogenesis of some mica-traps of Ramnagar area, Raniganj coalfield. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 133-140, 1952.

846. AGARWALLA, B. P., Indian Mica—some economic and strategic aspects. *Bull. geol. min. & metal. Soc. India* **11**, 5-6, 1952.

847. AVDEN, J. B., & GHOSH, A. M. N., A short note on the occurrence of marble near Chhanggu in Eastern Sikkim. *Indian Min.* **6** (1) 15-20, 1952.

848. BANERJEE, ANIL KRISHNA, Gypsum deposit of Garur Chatti, Garhwal, U. P. (Lett.) *Cur. Sci.* **21** (10) 275, 1952.

849. BANERJEE, S. N., A study of our sulphur position. *Indian Min.* **5** (3) 136-139, 1951.

850. BHATNAGAR, M. S., Indian Tertiary coals (Pt. II) *. A study of the resins extracted from Palana lignite. *Indian Min.* **5** (3) 140-152, 1951.

851. CHAKRAPANI NAIDU, M. G., Grunerites from Sakarsanhalli and Robertsonpet areas, Kolar (Mysore State). *J. Mysore Univ. (N. S.) (B)* **13** (1) 15-23, 1952.

852. DEB, S., Occurrence of sedimentary mottled clay in Baldakhal and Champamura hills near Agartala. *Trans. Indian Ceram. Soc.* **11** (3) 123-132, 1952.

853. DEB, S., Occurrence of natural salts and selenite-gypsum in the neighbourhood of Lunkaransar Tal, north of Bikaner, Western Rajputana. *Bull. nat. Inst. Sci. India*, **1**, 94-99, 1952.

854. DEY, A. K., A note on dolomite and dolomitie rocks of India. *Indian Min.* **5** (3) 113-124, 1951.

855. FOX, C. S., Exploration for minerals. *Quart. J. geol. min. & metall. Soc. India* **24** (1-4) 9-17, 1952.

856. GANANATHAN, V. S., Coal and industrial centres in India. *J. Univ. Poona. (Geogr. Sect.)* (2) 1-5, 1952.

857. GHOSH, A. M. N., A new coalfield in the Sikkim Himalaya. *Cur. Sci.* **21** (7) 179-180, 1952.

858. GHOSH, P. K., Western Rajputana—Its tectonics and minerals, including evaporites. *Bull. nat. Inst. Sci. India*, **1**, 101-130, 1952.

553 ECONOMIC GEOLOGY AND MINERALOGY

cf. also 827, 841, 2211.

859. GODBOLE, N. N., The salinity of Sambhar lake. *Bull. nat. Inst. Sci. India*, **1**, 89-93, 1952.

860. KRISHNAN, M. S., India's resources of glass making sands and ceramic clays. *Trans. Indian Ceram. Soc.* **11** (2) 59-74, 1952.

861. KRISHNAN, M. S., Geographical control in relation to mineral industries. *Nat. geogr. Soc. India, Banaras, Bull.* No. 16, 1-6, 1952.

862. KRISHNASWAMI, S., Report on certain occurrences of sodium salts in parts of North and South Arcot districts, Madras State. *Madras G. O.* No. 871, 1-8, 1952.

863. LAKSHMI NARAYANA RAO, S. V., Ferriferous diopside (salite) from Gotivada, Vizagapatam district. (Lett.) *Cur. Sci.* **21** (9) 256, 1952.

864. MEHTA, B. F., Examination of quarry site for road metals in certain parts of the Dharwar district. (cyclostyled). Publ: Geol. Surv. of India.

865. MERH, SUKUMAR, Further study of the Majgawan diamond mine, Panna State, Central India. *Quart. J. geol. min. & metall. Soc. India* **24** (1-4) 125-132, 1952.

866. NARAIN, KEDAR., Uranium. *Indian Min.* **6** (1) 21-31, 1952.

867. NARASINHAN, M. D., Utilisation of Hyderabad clays for making fireclay refractories. Pt. II. *Trans. Indian Ceram. Soc.* **11** (3) 118-122, 1952.

868. PARTHASARATHI, M. N., SRIKANTIAH, B. S. & NIJHAWAN, B. R., Some observations on the structure of spheroidal graphite in nodular cast irons. *J. sci. industr. Res.* **11A** (11) 501-504, 1952.

869. PRASAD, T. V. & ROY, H. N., Investigations of properties of Indian felspars with special reference to their blending effect in ceramics. *Trans. Indian Ceram. Soc.* **11** (2) 76-104, 1952.

870. RAMA RAO, B., Some remarks on conservation and export control of minerals. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 19-24, 1952.

871. RAM, ATMA, BANERJEE, J. C., ROY, S. B. & VARSHNEY, Y. P., Studies on Indian talcs: Pt. I. General chemical and mineralogical characteristics. *J. sci. industr. Res.* **11A** (8) 341-346, 1952.

872. ROY CHOWDHURY, M. K., A note on the occurrence of bauxite deposits of the Amarkantak area. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 65-70, 1952.

873. SAHANA, D. B., Five year plan and development of minerals in India. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 31-32, 1952.

874. SAHNI, M. R., Mineral resources of Rajputana desert. *Bull. nat. Inst. Sci. India*, **1**, 100, 1952.

875. SARIN, J. L., The salinity of Rajasthan desert. *Bull. nat. Inst. Sci. India*, **1**, 83-88, 1952.

876. SEN, SAURINDRANTH & RAYCHAUDHURI, SUNILKUMAR, Dolerite dyke near Shihulibari, N. Manbhum, Bihar (Lett.) *Cur. Sci.* **21** (10) 276-277, 1952.

877. SETHI, M. L., Mineral resources of Rajasthan. *Bull. nat. Inst. Sci. India*, **1**, 76-82, 1952.

878. SHARMA, N. L., Some outstanding problems of the mica pegmatites. *Bull. geol. min. & metallur. Soc. India*, **11**, 27-30, 1952.

879. SIRCAR, J., Black sand of Puri sea beach. (Lett.) *Sci. & Cult.* **18** (2) 88, 1952.

880. SONDHI, V. P. & MEHTA, D. R. S., Gypsum in the Indian Union. *Indian Min.* **5** (4) 168-182, 1951.

881. SRIRAMDAS, A., The black sand concentrates of the Vizagapatam beach. *Quart. J. geol. min. & metallur. Soc. India* **23** (4) 169-180, 1951.

882. VARDHAN, HARSH, A note on physical characteristics of river sand. *Proc. nat. Inst. Sci. India* **18** (6) 539-546, 1952.

PALAEONTOLOGY

883. VENKATESH, V., A note on the testing of some steatite specimens from Rajasthan and Madhya Pradesh. *Indian Min.* **5** (3) 128-135, 1951.

884. VISWANATHAN, P. & SIRCAR, J., Black sand of Puri sea beach. (Lett.) *Sci. & Cult.* **18** (6) 294-295, 1952.

885. WADIA, D. N., Strategic minerals of India. *Def. Sci. J.* **2** (4) 198-199, 1952.

886. WADIA, D. N., Minerals and national reconstructions. *Quart. J. geol. min. & metallur. Soc. India* **24** (1-4) 3-8, 1952.

887. WADIA, D. N., The story of a stone. *Everyday Sci.* **1** (1) 4-10, 1952.

888. WEST, W. D., The mineral production on the Indian Union during 1948. *Rec. Geol. Surv. India* **82** (Pt. 3) 359-529, 1952.

889. Activities in the field of mineral resources—Annex B: Report to the Government of the Union of Burma on the development of the Kalewa coalfield. (2) First interim report on lignite resources of the region, the exploration and utilization—Preliminary report on lignite utilization with particular reference to power generation. (3) Preliminary report on coal classification for regional use (4) Preliminary report on the possibilities of joint research in treating low grade coal and iron ores, including lignites and laterites.

56 PALAEONTOLOGY

PALAEOBIOLOGY

cf. also 888.

890. RANDHAWA, M. S., Life in the Carboniferous period—The Coal age—The age of Amphibia and Lycopods. *J. sci. industr. Res.* **11A** (10) 452-462, 1952.

891. MISRA, R. C. & DUBE, S. N., A new collection and re-study of the organic remains from the Sunket shales (Vindhyan) Rampura, Madhya Pradesh. (Lett.) *Sci. & Cult.* **18** (1) 46-48, 1952.

PALAEOBOTANY

cf. also 889.

892. BOSE, M. N., *Brachiphyllum spiroxylum* sp. nov. from the Rajmahal hills, India. *J. Indian bot. Soc.* **31** (4) 287-296, 1952.

893. GHOSH, A. K. & BOSE, A., Microfossils from the Cambrian strata of the salt range, Punjab. *Trans. Bose Res. Inst.* **18**, 71-78, 1949-51.

894. GHOSH, A. K., TRIVEDI, B. S., SITHOLEY, R. V., VARMA, C. P. & SRIVASTAVA, P. N., Microfossils and the determination of the age of sedimentary rocks. (discussion). *Proc. 39th Indian Sci. Congr.* Pt. IV, 118-126, 1952.

895. GOSWAMI, S. K., Microfossils from the South Rewa Gondwana basin. *J. sci. Res. Banaras Hindu Univ.* **II**, 189-199, 1951-52.

896. NAGAPPA, Y., A note on H. C. Das Gupta's collection from the Nummulitic limestone of Cherrapunji, Khasi hill, Assam. *Quart. J. geol. min. & metallur. Soc. India* **23** (4) 181-182, 1951.

897. PURI, G. S., On fossil samaras of ash and other oleaceous leaves from the Pleistocene of India. *Bull. bot. Soc. Bengal* **4** (2) 89-93, 1950.

BIOLOGY

899-911

898. RAO, A. R. & VIMAL, K. P., Preliminary observations on the plant microfossil contents of some lignites from Warkalli in Travancore. *Cur. Sci.* **21** (11) 302-305, 1952.

PALAEOZOLOGY

cf. also 899.

899. RAO, A. R. & VIMAL, K. P., Tertiary pollen from lignites from Palana (Eocene) Bikaner. *Proc. nat. Inst. Sci. India* **18** (6) 595-601, 1952.

902. BAHL, K. N., Freshwater origin of fishes (Presidential address). *J. zool. Soc. India* **4** (2) 108-114, 1952.

900. TRIPATHI, B., A note on megaspores from lower Gondwana coal of Umaria coalfield, Dist. Sahdol (Vindhya Pradesh). (Lett.) *Cur. Sci.* **21** (11) 308-309, 1952.

903. GEORGE, V. P., On some Arthropod microfossils from India. *Agra Univ. J. Res. (Sci.)* **1**, 83-108, 1952.

901. VIMAL, K. P., Spores and pollen from Tertiary lignites from Dandot, West Punjab (Pakistan). *Proc. Indian Acad. Sci.* **36B** (4) 135-147, 1952.

904. SINGH, S. N., On the extension of Kirthar sea to Rajasthan. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 1-5) 7-9, 1952.

57 BIOLOGY

57¹ PREHISTORY

905. ALLCHIN, B. (MISS), A study of some palaeolithic artifacts from South India. *Cur. Sci.* **21** (10) 268-271, 1952.

908. SANKALIA, H. D., The condition of Rajputana in the past as deduced from Archaeological evidence. *Bull. nat. Inst. Sci. India* **1**, 43-50, 1952.

906. GHOSH, A., The Rajputana desert. Its archaeological aspect. *Bull. nat. Inst. Sci. India* **1**, 37-42, 1952.

909. SUBBARAO, B., Stone age cultures of Bellary. Pp. viii+62. Price Rs. 8/- Publication of the Deccan College Research Institute, Poona, 6.

907. GUPTA, MONORANJAN, Where is Ptolemy's Kirradia? *Proc. 39th Indian Sci. Congr. Pt. IV.* (abstr.) 38, 1952.

910. VATS, M. S., Conditions of the Rajputana desert; the archaeological evidence. *Bull. nat. Inst. Sci. India* **1**, 50, 1952.

911. ZEUNER, F. E., Prehistory in India. 1951. Price Rs. 2/8/- Misc. Publication of the Deccan College Research Institute, Poona, 6.

912. ZEUNER, F. E., Stone age and Pleistocene chronology in Gujarat. Pp. 46. Rs. 8/-. Publication of the Deccan College Research Institute, Poona 6.

572 ANTHROPOBIOLOGY

913. ALLENS, G. T., Hill tribes of Assam—The Daflas. *J. biol. Soc. Assam* 1 (2) 24-27, 1951.

914. BOSE, U., Blood groups of the tribes of Travancore. *Bull. Dep. Anthropol.* 1 (1) 19-24, 1952.

915. BOSE, U., Blood groups of the Bhils. *Bull. Dep. Anthropol.* 1 (1) 14-18, 1952.

916. BOSE, U. & RAY, P. C., Applications of performance tests on the Bhils of Central India. *Bull. Dep. Anthropol.* 1 (1) 31-58, 1952.

917. DAS, S. R., Indian Anthropology in current literature. *Man in India* 32 (4) 251-254, 1952.

918. DOVER, CEDRIC, Antar for the anthropologist. *East Anthropol.* 5 (4) 165-169, 1952.

919. DOVER, CEDRIC, The classification of man. *Cur. Sci.* 21 (8) 209-213, 1952.

920. EHRENFELS, U. R., Kinship terms and social organisation among the Khasi of Assam. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 38-39, 1952.

921. EHRENFELS, U. R., Kinship terms among the Khasis. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 38, 1952.

922. FUCHS, STEPHEN, The Fourth International Congress for Anthropology and Ethnology at Vienna, September, 1952. *J. anthrop. Soc. Bombay (N. S.)* 6(2) 47-53, 1952.

923. GISBERT, P., Sociology's debt to Anthropology. *J. anthrop. Soc. Bombay (N. S.)* 6 (1) 1-13, 1952.

924. GUHA, B. S., Report of a Survey of the inhabitants of the Andaman and Nicobar islands during 1948-49. *Bull. Dep. Anthropol.* 1 (1) 1-7, 1952.

925. JOSHI, A. C., The home of civilisation. *Everyday Sci.* 1 (1) 44-47, 1952.

926. KARVE, I. & DANDEKAR, V. M., Anthropometric measurements of Maharashtra. Publication of the Deccan College Research Institute, Poona, 6, 1951. Rs. 12/-. Pp+VI+134+2 maps+24.

927. ORR, KENNETH, The place of anthropology among the social studies of Burma. *J. Burma Res. Soc.* 24 (Pt. I) 1951.

928. PRAKASI, KANTI, The concept of race. *J. biol. Soc. Assam* 1 (2) 28-31, 1951

929. ROSSER, COLIN, An aspect of the political organisation of Malana. *East. Anthropol.* 6 (1) 68-82, 1952

930. ROY CHOWDHURI, P. C., The Tharus. *Man in India* 32 (4) 246-250, 1952.

931. SAHNI, M. R., Man in evolution. Publ: Orient Longmans Ltd., Madras, 2, 1952. Rs. 8/12/-. Pp x+272.

932. SARKAR, S. S., Blood groups from the Andaman and Nicobar islands. *Bull. Dep. Anthropol.* 1 (1) 25-30, 1952.

933. SARKAR, S. S. & SEN, D. K., Further blood group investigations in Santal Paraganas. *Bull. Dep. Anthropol.* 1 (1) 8-13, 1952.

934. SHAH, P. G., International Standard anthropometric measurements. *J. Anthropol. Soc. Bombay (N. S.)* **6** (2) 59-61, 1952.

935. SHAH, P. G., Wenner-Gren International Symposium on Anthropology, New York, June 9 to June 20, 1952. *J. Anthropol. Soc. Bombay (N. S.)* **6** (2) 27-46, 1952.

936. SHAH, P. G., Cultural synthesis in India. *J. Anthropol. Soc. Bombay (N. S.)* **6** (2) 62-65, 1952.

937. SHYAM CHAUDHURY, N. K., The enumeration and treatment of tribes in the Indian Census. A study in retrospect. *Proc. 39th Indian Congr. Pt. IV* (abstr.) 38, 1952.

938. A brief survey of Indian Anthropological literature—1946-47. *Bull. dep. Anthropol.* **1** (1) 154-159, 1952.

574/577 GENERAL BIOLOGY

939. COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH, INDIA, The Wealth of India—Raw materials. Vol. III, D-E with Index to Vol. I-III. Pp 236. Available : C S. I. R. Bldg. Old Mill Rd., New Delhi.

576.1 ORIGIN OF LIFE

940. HORA, S. L., Parallel evolution in the Crosostomid fishes on the mainland of Asia and in Borneo. *Proc. nat. Inst. Sci. India* **18** (5) 417-421, 1952.

941. HORA, S. L., MUKHERJI, D., SESHACHAR, B. R., JOSHI, A. C. & MOOKERJEE, S., KHAJURIA, H. & PUSHKARNATH, Symposium on "Is evolution purposive"? *Proc. 39th Indian Sci. Congr. Pt. IV*, 127-131, 1952.

942. HORA, S. L., Parallel evolution of the Gastromyzonid fishes on the mainland of Asia and in the island of Borneo. *Proc. nat. Inst. Sci. India* **18** (5) 407-416, 1942.

943. RANDHAWA, M. S., The story of life through the ages. *Everyday Sci.* **1** (1) 11-23, 1952.

944. SILAS, E. G., Further studies regarding Hora's Satpura hypothesis. 2. Taxonomic assessment and levels of evolutionary divergences of fishes with the so-called Malayan affinities in Peninsular India. *Proc. nat. Inst. Sci. India* **18** (5) 423-448, 1952.

576.8 MICROBIOLOGY

cf. also 1490, 1503, 1579, 1580, 1586, 1588, 1589, 1591-1593,

945. BROKER, RAJUL & BHAT, J. V., Phagocytic co-efficient as a measure for evaluating plant antibiotics. *Indian J. med. Res.* **40** (3) 361-371, 1952.

946. DAS, BASANTA KUMAR, Antibiotics and micro-biol antagonism. *J. biol. Soc. Assam* **1** (2) 21-23, 1951.

947. IYER, V. & BHAT, J. V., Thermal resistance of certain dominant aerobic bacilli. *J. sci. industr. Res.* **11B** (10) 427-430, 1952.

948. IYER, V. & BHAT, J. V., The resistance of certain dominant bacilli to food preservatives. *J. sci. industr. Res.* **11B** (11) 480-481, 1952.

949. IYER, V. & BHAT, J. V., The "Hay bacillus". *Indian J. Dairy Sci.* **5** (4) 167-169, 1952.

950. LAXMINARAYANA, H., NAMBUDRIPAD, V. K. N., LAKSHMINARASIM, V., ANANTARAMIAH, S. N., SREENIVASAMURTHY, V. & IYER, K. K., Studies on *Dahi*. III. Taxonomy of the lactic acid bacteria of *Dahi*. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. I) 27-49, 1952.

951. MACMILLAN, W. G., BOSE, R. G. & BHATTACHARYA, J. P., A note on a copper tolerant Penicillium. Pt. I. Some preliminary observations. (Lett.) *Sci. & Cult.* **18** (2) 94-95, 1952.

BIOLOGY

952. MACMILLAN, W. G., BOSE, R. G. & BHATTACHARYYA, J. P., A note on a copper tolerant Penicillium. Pt. II. Its cellulolytic activity and effect on copper proofed hessian. (Lett.) *Sci. & Cult.* **18** (6) 287-288, 1952.

953. PILLAI, S. C. & MOHAN RAO, Observations on the micro-organisms in decomposing sewage sludge. (Lett.) *Sci. & Cult.* **18** (3) 147-148, 1952.

954. ROY, HIMANSU KUMAR, Water microscopy. *Sci. & Cult.* **18** (5) 218-224, 1952.

955. SEAL, S. C., The science of Microbiology. *J. Indian med. Assoc.* **22** (3) 117-119, 1952.

956. VAKIL, J. R., KHAMBATA, S. R. & BHAT, J. V., Morphological and other studies on two *Nocardia* species. *Proc. Indian Acad. Sci.* **36B** (6) 243-248, 1952.

957. VENKATARAMAN, R. & SREENIVASAN, A., A preliminary investigation of the bacterial flora of the mackerels of the West Coast. *Indian J. med. Res.* **40** (4) 529-533, 1952.

ANTIGENS AND ANTIBODIES

958. BANKER, DUSHYANT D., Preliminary observations on antibody patterns against certain viruses among inhabitants of Bombay City. *Indian J. med. Sci.* **6** (11) 733-746, 1952.

959. BIRD, G. W. G., The Rhesus antibodies. *Antisep.* **49** (9) 701-702, 1952.

960. BIRD, G. W. G., An unusual form of haemagglutination with certain potato extracts. (Lett.) *Cur. Sci.* **21** (7) 195-196, 1952.

961. GHARPURE, P. V., Further observations on helminthic antigens. *Indian J. med. Sci.* **6** (9) 601-602, 1952.

962. RAMAKRISHNAN, T., PILLAI, N. C. & GIRI, K. V., The occurrence of a blood anti-coagulant factor in the latex of *Carica papaya*. (Lett.) *Cur. Sci.* **21** (9) 251-252, 1952.

ANIMAL PARASITOLOGY. CARRIERS OF DISEASE

963. CHATTERJEE, ANUPAM, The pathological significance of the infestation of the Diptera and its larva on animals. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 34-35, 1952.

964. KALRA, S. L., Sandfly survey in Kashmir. *J. Army med. Corps. India* **8** (3) 124-125, 1952.

965. MITEA, R. D., Note on the egg laying medium for the breeding of house flies. *J. Army med. Corps India* **8** (3) 153-154, 1952.

577.1 BIOCHEMISTRY.BIOLOGICAL CHEMISTRY

cf. also 720, 1040, 1364

966. BAPTIST, N. G., Essential amino-acids in cereals—Kurukan (Finger seed, Regi) and Sorghum. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 38, 1952.

967. BAPTIST, N. G., Essential amino acids in legumes—Black gram or Ulundu (*Phaseolus mungo*). *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 39, 1952.

968. GOVINDARAJAN, V. S. & RAMACHANDRAN, B. V., L-lysine content of some oilseed cakes. *J. sci. industr. Res.* **11B** (11) 477-479, 1952.

969. JHAVERI, J. D. & JOSHI, N. V., Effects of growth factors on yields of indigenous strains of yeast. *Indian J. Pharm.* **14** (7) 128-130, 1952.

970. MULAY, I., DHOPESHWARAKAR, G. A. & MAGAR, N. G., Losses of nutrients during cooking of vegetables. *Indian J. med. Res.* **40** (3) 443-453, 1952.

971. RADHAKRISHNAMURTY, R. & SARMA, P. S.; A modification in the paper chromatography separation of sugars and amino acids. *J. sci. industr. Res.* **11B** (7) 279-282, 1952.

972. RAMA RAO, P. B., BALAKRISHNAN, S. & RAJAGOPALAN, R. Spray drying of Indian gooseberry juice. (Lett.) *Cur. Sci.* **21** (10) 277, 1952.

973. RAMA RAO, P. B., BALAKRISHNAN, S. & RAJAGOPALAN, R., Influence of freezing on the volume of juice extracted and ascorbic acid content of certain fruits. (Lett.) *Cur. Sci.* **21** (12) 337-338, 1952.

974. VISWANATHA, T. & DE, S. S., Nature of proteolytic inhibitors in soybeans and effect of heat on soybean. *Indian J. Physiol. & Alld. Sci.* **6** (4) 137-14, 1952.

975. VISWANATHA, T. & DE, S. S., Nature of the proteolytic inhibitors in soybeans and effect of heat on soyprotein. *Indian J. Physiol. & Alld. Sci.* **6** (3) 95-101, 1952.

ENZYMES

cf. also 1009, 1206 transaminase activity; 1556

976. ARORA, K. L. & KRISHNA MURTI, C. R., Studies on enzyme inhibition in relation to drug action: III—Action of certain antibiotics on amylases. *J. sci. industr. Res.* **11B** (9) 383-386, 1952.

977. CHITRE, R. G. & KELKAR, SHANTA, The inhibition of Thiaminase by micro amounts of acetaldehyde. (Lett.) *Cur. Sci.* **21** (8) 219-220, 1952.

978. GAITONDE, M. K. & SOHONIE, KAMALA, On the occurrence of a trypsin inhibitor in field bean (*Dolichos lablab*) and a few other common Indian pulses. *J. sci. industr. Res.* **11B** (8) 339-341, 1952.

979. GHOSH, B. N. & BHATTACHARYA, K. L., Presence of inhibitor of pyruvic dehydrogenase in some snake venoms. (Lett.) *Sci. & Cult.* **18** (6) 253-254, 1952.

980. RAMAMURTI, K., Determination of arginine by enzyme arginase *Proc. Rajasthan Acad. Sci.* **III**, 28-35, 1952.

VITAMINS

cf. also 1002, 1003, 1012, 1204, 1220, 1385, 1386, 2989

981. BHATTACHARYA, SUKHAMOY & BANERJEE, SURESH. On the determination of thiamine hydrochloride, *J. & Proc. Instn. Chem. (India)* **24** (Pt. 4) 213-218, 1952.

982. BOSE, A. N. & GHOSH, SATYA, On the assay of Vitamin B₁₂ activity in liver extract. (Lett.) *Sci. & Cult.* **18** (1) 44-45, 1952.

983. DE, H. N., Biosynthesis of Vitamins. *Agra Univ. J. Res. (Sci.) I*, 109-129, 1952.

984. HATWALNE, B. V. & SOHONIE, KAMALA, Thiamine, riboflavin, nicotinic acid and Vitamin C contents of palm gur. (Lett.) *Cur. Sci.* **21** (12) 349, 1952.

985. KARMARKAR, G. & RAJAGOPAL, K., Assay of Vitamin A and carotene in blood serum. (Lett.) *Cur. Sci.* **21** (7) 193, 1952.

986. RAMACHANDRAN, L. K. & SARMA, P. S., The liberation of serine and threonine during proteolysis. *J. sci. industr. Res.* **11B** (9) 379-382, 1952.

987. SHANMUGA SUNDARAM, E. R. B. & SARMA, P. S., Studies on the inter-relationship among vitamins and amino-acids. *J. Madras Univ.* **22B** (1) 84-91, 1952.

HORMONES

988. FRIEDMANN, HERBERT C., A method to diminish the amount of pigment extracted from urine by fat solvents in colorimetric 17-Ketosteroid estimation. (Lett.) *Cur. Sci.* **21** (10) 282-283, 1952.

989. KAR, AMIYA B. & GHOSH, ASOK, Studies on cytochemistry of hormone action. Pt. XI. The distribution of ascorbic acid in the adrenal cortex of normal and estrogen-treated pigeons. *Proc. nat. Inst. Sci. India* **18** (4) 261-263, 1952.

578/579 BIOLOGICAL TECHNIQUE

990. VENKATAPATHI, T., An easy method of colour preservation in plant specimens for Museums and herbaria. *Madras agric J.* **39** (11) 565-568, 1952.



58 BOTANY

581.01/07 INFLUENCE OF VARIOUS FACTORS

991. SEN GUPTA, J. C. & SEN, GITA, Further investigations on the photoperiodic effect in jute. *Indian J. agric. Sci.* **22** (Pt. I) 1-32, 1952.

581.1 PLANT PHYSIOLOGY

997. ABEYWICKRAMA, B. A., Reproduction by gemma in *Cheilanthes masurensis* Wall. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* **26**, 1952.

992. SINGH, BHOLA NATH & JALOTE, SHRI RAM, Effect of day length on growth, yield and nodulation in *Phaseolus radiatus*. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 31-32, 1952.

998. BOSE, D. M., Sensitivity in plants. *Sci. & Cult.* **18** (4) 161-164, 1952.

993. SINGH, BHOLA NATH & JALOTE, SHRI RAM, Effect of day-length on growth, development and yield of paddy. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 30-31, 1952.

999. BOSE, SUNANDA, Biological effect of ultrasonic radiations. 1. Effect of plant root tips. *Trans. Bose Res. Inst.* **18**, 99-104, 1949-51.

994. SINGH, BHOLA NATH & JALOTE, SHRI RAM, Effect of day-length on growth, development tuberisation and yield of potato. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 31, 1952.

1000. BOSE, D. M. Tropic, diurnal and irritability responses in plants. *Trans. Bose Res. Inst.* **18**, 1-21, 1949-51.

995. SINGH, BHOLA NATH & JALOTE, SHRI RAM, The controlling influence of ultra-violet and infra-red rays on growth and yield of paddy. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 32, 1952.

1001. CHATTOPADHYAY, H. & BANERJEE, S., Studies on the ascorbic-acid oxidase activity of some common Indian pulses during germination. *Indian J. med. Res.* **40** (3) 439-442, 1952.

996. TALUKDAR, SUMITRA, Photoperiodism in sunnhemp C12. *Crotalaria juncea* L (Lett.) *Cur. Sci.* **21** (12) 343, 1952.

1002. DE, H. N. & DATTA, S. C., Studies on the mechanism of biosynthesis of nicotinic acid during germination of cereals and pulses. *Indian J. agric. Sci.* **21** (Pt. IV) 375-394, 1951.

1003. DE, H. N. & DATTA, S. C., Effect of colchicine on the synthesis of nicotinic acid in germinating seeds. *Indian J. agric. Sci.* **21** (Pt. IV) 395-400, 1951.

1004. DEB, D. B., New record of epiphyllous bud in *Nymphaea stellata* Willd. (Lett.) *Sci & Cult.* **18** (6) 290-291, 1952.

1005. DUTT, B. K., GUHA THAKURTA, A. & DUTT, MRIDULA (Miss), Autonomous pulsatory movement of the leaflet of *Oxalis repens* Thunb. (Bengali—*Amrool*). *Trans. Bose. Res. Inst.* **18**, 123-128, 1949-51.

1006. DUTT, MRIDULA (Miss). The structural basis of sensitivity in *Mimosa pudica* Linn. *Trans. Bose. Res. Inst.* **18**, 31-46, 1949-51.

1007. FOGG, G. E., The fixation of nitrogen by algae. *J. biol. Soc. Assam* **1** (2) 3, 1951.

1008. GHOSH, JAGAT JIBAN, Changes in the phytin-phosphorus content of rice grains during mould attack. *Indian J. Physiol. & Alld. Sci.* **6** (3) 102-106, 1952.

1009. GIRI, K. V., RADHAKRISHNAN, A. N. & VAIDYANATHAN, C. S., Transaminase activity in plants. *J. Indian Inst. Sci.* **34 A** (4) 305-313, 1952.

1010. GUHA THAKURTA, A. & DUTT, B. K., Periodicity in plant growth (with special reference to cinchona). *Trans. Bose Res. Inst.* **18**, 47-70, 1949-51.

1011. GUPTA, D. D., Sporulation and aversion in *Eurotium herbariorum* (Wigg). *Indian Phytopath.* **4** (2) 106-111, 1951.

1012. KALYANASUNDARAM, R., Ascorbic acid and *Fusarium* wilted plants. *Proc. Indian Acad. Sci.* **36B** (3) 102-104, 1952.

1013. JACOB, K. T., X-ray studies in Jute-II. A comparative study of the germination percentage, size and external morphology, with different doses of X-rays. *Trans. Bose. Res. Inst.* **18**, 23-30, 1949-51.

1014. LAL, K. N., RAO, M. S. S. & DE, R., Nutrient effect upon chlorophyll content of sugarcane leaves. *Proc. nat. Inst. Sci. India* **18** (6) 603-619, 1952.

1015. LAL, K. N. & SUBBA RAO, M. S., Studies in crop physiology. Effects of N-P-K ratios on growth characters of barley. *J. Indian bot. Soc.* **31** (4) 217-239, 1952.

1016. MAHABALE, T. S. & D'MELLO, JOYCE, Apogamy in *Salvinia* (Lett.) *Cur. Sci.* **21** (8) 227-228, 1952.

1017. MATHUR, R. S., Function of spore matrix in *Colletotrichum lindemuthianum*. *Indian Phytopath.* **4** (2) 152-155, 1951.

1018. MEENAKSHI, K. & KRISHNA RAO, P., Chlorophyll deficiency in *Striga* (Lett.) *Cur. Sci.* **21** (9) 248, 1952.

1019. NAVALKAR, B. S., Chlorophyll contents of the leaves of the rice (*Oryza sativa* L.) under different treatments. *J. Univ. Bombay* **21B** (N. S.) (Pt. 3) (32) 74-87, 1952.

1020. PRASAD, B. N., On some phases in the reproduction of *Ulothrix*. (abstr.) *Bull. bot. soc. Univ. Saugar* **3** (1 & 2), 1952.

1021. RAHEJA, P. C., Recent physiological investigation on drought resistance in crop plants. *Indian J. agric. Sci.* **21** (Pt. IV) 335-346, 1951.

1022. SAKSENA, R. K., JAIN, S. K. & JAFRI, S. M. H., Sulphur and nitrogen requirements of the genus *Pythium*. *J. Indian bot. Soc.* **31** (4) 281-286, 1952.

1023. SANKARASUBRAMONY, H., PANDALAI, K. M. & MENON, K. P. V., On the nutritive content of the leaf tissues of the coconut palm in health and disease. *Indian cocon. J.* **6** (1) 7-18, 1952.

BOTANY

1024. SEN, NIRAD K., Chemical mutagenesis in the tomato. *Bull. bot. Soc. Bengal* **5** (2) 115-125, 1951.

1025. SEN, S. P., The biochemical aspects of flowering. *Bull. bot. Soc. Bengal* **5** (2) 87-113, 1951.

1026. SENARATNA, J. E., Carnivorous plants of Ceylon. *Trop. Agric.* **CVIII** (3) 162-165, 1952.

1027. SESHAGIRI, P. V. V. & SASTRI, R. L. N., T. A. N. Changes in the leaves of *Tamarindus indica* Linn. (Lett.) *Cur. Sci.* **21** (7) 190, 1952.

1028. SINGH, BHOLA NATH, Effect of manuring and nutrients on photosynthesis. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 28, 1952.

1029. SINGH, BHOLA NATH, The relation of respiration to photosynthesis chlorophyll and growth. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 29-30, 1952.

1030. SINGH, BHOLA NATH, The response of the respiratory system to age and developmental stages of crops. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 29, 1952.

1031. SINGH, BHOLA NATH, Physiological stages as representative of critical nutrient requirements of crops. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 50, 1952.

1032. SINGH, BHOLA NATH, The relative efficiency of combined forms of nitrogen on the physiology of growth and yield of crops raised on different soils of U. P. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 29, 1952.

1033. SINGH, BHOLA NATH, & DABRAL, BAL GOVIND, The relation between respiration and nutrient supply in crop plants. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 29-30, 1952.

1034. SINGH, BHOLA NATH & DABRAL, BAL GOVIND, Effect of hormones on growth performance and yield of paddy. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 33-34, 1952.

1035. SINGH, BHOLA NATH & GUPTA, PATESHWARI PRASAD, Effect of phosphorus, calcium and sulphur in varying doses and combinations of photosynthetic activity of wheat. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 29, 1952.

1036. SINGH, BHOLA NATH & GUPTA, PATESHWARI PRASAD, Effect of size of nitrogen dressings on photosynthesis and respiration in wheat. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 28, 1952.

1037. SOLOMON, S., Studies in the physiology of phanerogamic parasitism with special reference in *Striga lutea* Lour and *S. desiflora* Benth on *Andropogon sorghum* Hack. II. The influence of temperature and moisture on the germination and growth of *S. lutea* and *S. densiflora*. *Proc. Indian Acad. Sci.* **36B** (5) 198-213, 1952.

1038. TANDON, S. L., Some physiological aspects of autotetraploidy in *Brassica campestris* L. var. *Sarson* Prain. (Lett.) *Sci. & Cult.* **18** (1) 40-41, 1952.

1039. VAN DILLEWIJN, C., Respiration in cane- a neglected subject. *Indian Sug.* **2** (5) 179-181, 1952.

1040. VISWANATHA, T., RAJAGOPALAN, R. & DR. S. S., The mechanism of the proteolytic inhibitors present in soybeans. *J. Indian Inst. Sci.* **34A** (3) 253-259, 1952.

1041. WHITHOUSE, H. L. K., The significance of some sexual phenomena in the fungi. *Indian Phytopath.* **4** (2) 91-105, 1951.

581.2 PLANT PATHOLOGY. MALFORMATIONS

1042. DATTA, A. N. & DATTA, R. M., Polymer in the floral organs of *Solanum nigrum* Linn. (Lett.) *Sci. & Cult.* **18** (5) 242, 1952.

1043. DUTT, B. S. M., On the abnormal cones of *Gnetum*. (Lett.) *Sci. & Cult.* **18** (4) 199, 1952.

1044. ISLAM, AHMAD SHAMSUL, Fasciation in *Benincasa cerifera* Sair. (Lett.) *Sci. & Cult.* **18** (1) 35, 1952.

1045. RAMACHANDRAN, L. K., Plant tumours versus animal tumours. *J. Madras Univ.* **22B** (2) 268-276, 1952.

1046. SRIVASTAVA, R. K., Abnormal leaves of *Cycas revoluta* Thunb 1. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 1-5) 11-18, 1952.

1047. SRIVASTAVA, R. K., Abnormal leaves of *Cycas revoluta* Thunb 1. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 1-5) 19-20, 1952.

581.3 PLANT EMBRYOLOGY

cf. also 1073, 1059

1048. BHARGAVA, H. R. Microsporogenesis in *Deeringia celosioides* R. Br. (abstr.) *Bull. bot. Soc. Univ. Saugar* **3** (1 & 2) **11**, 1950-51.

1049. CAVE, MARION S., Sporogenesis and gametogenesis in *Odontostomum Hartwegii* Torr. *Phytomorph.* **2** (4) 210-214, 1952.

1050. DNYANASAGAR, V. R., Embryological studies in the Leguminosae. IV. A contribution to the embryology of *Neptunia triquetra* Benth. *Proc. Indian Acad. Sci.* **36B** (1) 1-11, 1952.

1051. FAROOQ, MOHD., The embryology of *Borreria hispida* K. Schum. (*Spermacoce hispida* Linn) (Rubiaceae), a reinvestigation. (Lett.) *Cur. Sci.* **21** (9) 252-253, 1952.

1052. GOVINDAPPA, D. A. & SHERIFF. A contribution to the life history of *Scilla indica* Baker. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 25, 1952.

1053. KNOBLOCH, IRWING W., A comparison of fertility in panicles of *Bromus inermis* Leyss in Michigan. *Phytomorph.* **2** (4) 243-245, 1952.

1054. MAHESHWARI, P. & ROY, S. K., The embryo sac and embryo of *Tridax procumbens* L. *Phytomorph.* **2** (4) 245-252, 1952.

1055. MUKHERJEE, S. K., Abnormal microsporocytes in *Cesalpinia pulcherrima* Sw. (Lett.) *Cur. Sci.* **21** (10) 290, 1952.

1056. MURTY, Y. S., Placentation in *Peperomia*. *Phytomorph.* **2** (2, 3) 132-134, 1952.

1057. NAYAR, B. K. & KACHROO, P., Development of antheridium in advanced Leptosporangiates. (Lett.) *Sci. & Cult.* **18** (4) 200-201, 1952.

1058. PAL NIRANJAN, A contribution to the life-histories of *Stellaria media* Linn and *Polycarpon loeflingiae*, Benth & Hook. *Proc. nat. Inst. Sci. India* **19** (5) 363-378, 1952.

1059. RAJU, M. V. S., Embryology of the *Anagallis pumila* Swartz. *Proc. Indian Acad. Sci.* **36** (1) 34-42, 1952.

1060. RAJU, M. V. S., Embryology of the *Passifloraceae*. (Lett.) *Cur. Sci.* **21** (10) 288-289, 1952.

1061. RAJU, M. V. S. & NAGARAJA RAO, A., The development of the male and female gametophytes in *Mallotus albus* Mull. *J. Mysore Univ. (N. S.)* **13B** (1) 5-8, 1952.

1062. RAZI, B. A. & SUBRAMANYAM, K., Embryology of the Dipsacaceae. I. Glands, the male and female gametophytes. *Proc. Indian Acad. Sci.* **36B** (6) 249-257, 1952.

1063. STOKEY, ALMA G. & ATKINSON, LENETTE R., The gametophyte of *Acrostichum speciosum* Willd. *Phytomorph.* **2** (2-3) 105-113, 1952.

1064 STOKEY, ALMA G. & ATKISON, LENETTE R., The gametophyte and young sporophyte of *Matonia pectinata* R. Br. *Phytomorph.* **2** (2-3) 138-150, 1952.

1065. SUBRAMANYAM, K., The nutritional mechanism of the embryo sac and embryo in the families Campanulaceae, Lobeliaceae and Stylidiaceae. *J. Mysore Univ. (N. S.)* **13B** (1) 1-4, 1952.

1066. SUBRAMANYAM, K. & NAGARAJA RAO, A., A contribution to the embryology of *Chlorophytum attenuatum* Bak. *Proc. Indian Acad. Sci.* **36B** (5) 191-197, 1952.

1067. SWAMY, B. G. L., Some aspects in the embryology of *Zygogynum Bailloni* v. Tiegh. *Proc. nat. Inst. Sci. India* **18** (5) 399-406, 1962.

1068. VENKATA RAO, C., Contributions to the embryology of the Sterculiaceae-IV. Development of the gametophytes in *Pterospermum suberifolium* Lam. *J. Indian bot. Soc.* **31** (4) 251-260, 1952.

1069. VENKATA RAO, C., A case of reversed polarity in the embryo sac of *Helicteres isora* L. (Lett.) *Sci. & Cult.* **18** (6) 285, 1952.

1070. VENKATESH, C. S., Anther and pollen grains of *Zannichellia palustris* L. (Lett.) *Cur. Sci.* **21** (8) 225-226, 1952.

1071. VENKATESWARLU, J., Contributions to the embryology of Combretaceae : I-*Poivrea coccinea* DC. *Phytomorph.* **2** (4) 231-240, 1952.

1072. VENKATESWARLU, J., Embryological studies in Lecythidaceae. -I. *J. Indian bot. Soc.* **31** (3) 103-116, 1952.

581.4 PLANT MORPHOLOGY

cf also 2566

1073. BAKSHI, T. S., Floral morphology and embryology of *Psilostachys sericea* Hook F. *Phytomorph.* **2** (2-3) 151-161, 1952.

1074. BAUM, HERMINE, Der bau des karpellstiels von *Grevillea thelemanniana* und siene bedeutung für die beurteilung der epeltaten karpelle. *Phytomorph.* **2** (4) 191-197, 1952.

1075. BLOCH, ROBERT, The problem of form in present-day Botany. *Phytomorph.* **2** (4) 215-224, 1952.

1076. CHATTERJEE, D. & NAGBISWAS, S. C., Observations on the floral biology of sweet potato. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr). 27-28, 1952. *J. Indian bot. Soc.* **31** (4) 352-357, 1952.

1077. CHAKRAVERTI, D. N., Variations in the morphology of the pistil and the stamen of *Sesbania grandiflora* (Linn) Pers. (Lett.) *Sci. & Cult.* **18** (6) 292-293, 1952.

1078. CHANDRASEKHAR, M. S., An unusual inflorescence of *Moringa oleifera* Lamk. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 296-297, 1952.

1079. DAVIS, T. A. & MENON, K. P. V., A "bispatheate" coconut palm. *Indian cocon. J.* **6** (1) 30-34, 1952.

1080. DUTT, MRIDULA, Carpel metamorphosis in *Jasminum glandiflorum*. Linn. *Bull. bot. Soc. Bengal* **4** (2) 95-103, 1950.

1081. FAROOQ, MOHD., Bicarpellate flower of *Poinciana pulcherrima* L. (*Caesalpinia pulcherrima* Sw.). (Lett.) *Sci. & Cult.* **18** (4) 192, 1952.

1082. HAGERUP, O., The morphology and biology of some primitive orchid flowers. *Phytomorph.* **2** (2-3) 134-138, 1952.

1083. JOHRI, B. M. & TIAGI, B., Floral morphology and seed formation in *Cuscuta reflexa* Roxb. *Phytomorph.* **2** (2-3) 162-180, 1952.

1084. OGURA, YUDZURU, Morphology of the subterranean organs of *Erythronium japonicum* and its allies. *Phytomorph.* **2** (2-3) 113-122, 1952.

1085. OZENDA, PAUL, Remarques sur quelques interpretations de l'etamine. *Phytomorph.* **2** (4) 225-231, 1952.

1086. SAFEULLA, K. M., Morphological and cytological studies of *Albugo* species on *Ipomoea hederacea*. (Lett.) *Cur. Sci.* **21** (10) 287-288, 1952.

1087. SINGH, BAHADUR, Studies on the structure and development of seeds of the Cucurbitaceae: I—Seeds of *Echinocystis Wrightii* Cogn. *Phytomorph.* **2** (4) 201-209, 1952.

1088. THAKUR, C., Accessory buds in sugarcane. (Lett.) *Cur. Sci.* **21** (7) 192-193, 1952.

1089. THATHACHAR, T., Morphological studies in the Euphorbiaceae I—*Acalypha lanceolata* Willd. *Phytomorph.* **2** (4) 197-201, 1952.

1090. VAN DEB PIJL, L., The stamens of *Ricinus*. *Phytomorph.* **2** (2-3) 130-132, 1952.

581.5 PLANT ECOLOGY

cf. also 1026, 1101

1091. AGHARKAR, S. P., Plant ecology of the Rajputana desert. *Bull. nat. Inst. Sci. India*, **1**, 246-247, 1952.

1092. BAKSHI, T. S., The autecology of *Anisochilus eriocephalus* Benth. *J. Indian bot. Soc.* **31** (4) 269-280, 1952.

1093. BANERJI, J., The role of vegetation in desert control. *Bull. nat. Inst. Sci. India* **1**, 277-283, 1952.

1094. BANERJI, J., Discussion on the role of vegetation in desert control. *Indian For.* **78** (7) 376-378, 1952.

1095. CHATURVEDI, M. D., The Rajputana desert: A scheme for its immobilisation. *Bull. nat. Inst. Sci. India* **1**, 269-272, 1952.

1096. CORREA, J. P., The eco-anatomy of the roots of some plants of Western India. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 24, 1952.

1097. GUPTA, A. C., The vegetation of the terraces of the Tons River, near Tapkeshwar, Dehra Dun. *J. Indian bot. Soc.* **31** (4) 261-268, 1952.

1098. KAPADIA, G. A., Ecological and statistical notes on the grasses of Kathiawar. *J. Indian bot. Soc.* **31** (4) 247-250, 1952.

1099. KRISHNASWAMY, V. S. & GUPTA, R. S., Rajputana Desert—its vegetation and its soil. *Indian Forestr.* **78** (12) 595-601, 1952.

1100. MISRA, R. & JOSHI, N. K., The forest-complex of Patharia hill, Sagar. *J. Indian bot. Soc.* **31** (3) 154-170, 1952.

1101. PANDEYA, S. C., Notes on the autoecology of *Bothriochloa pertusa* Willd and *Dichanthium annulatum* Stapf. (abstr.) *Bull. bot. Soc. Univ. Saugar* **3** '1 & 2) 4-10, 1950-51.

1102. PANDEYA, SATISH CHANDRA, Grasslands of Sagar, Madya Pradesh. *Indian Forestr.* **78** (12) 638-654, 1952.

1103. PURI, G. S., The field method in the study of plant communities. *J. Indian bot. Soc.* **31** (3) 204-213, 1952.

1104. PURI, G. S., The present position of the plant ecology of North Western Rajasthan. *Bull. nat. Inst. Sci. India* **1**, 233-240, 1952.

1105. RATNAM, B. V. & JOSHI, M. C., An ecological study of the vegetation near abouts a temporary pond in Pilani. *Proc. Rajasthan Acad. Sci.* **III**, 45-59, 1952.

1106. ROY, HIMANSU KUMAR, A limnological study of the settling tank in relation to Calcutta water filtration process. *Bull. bot. Soc. Bengal* **4** (2) 105-138, 1952.

1107. SARUP, SHANTI, Plant ecology of Jodhpur and its neighbourhood. A contribution to the ecology of North Western Rajasthan. *Bull. nat. Inst. Sci. India* **1**, 223-232, 1952.

1108. SRIVASTAVA, G. D. & TANDON, R. K., A study in the autoecology of *Trapa bispinosa* Roxburgh. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 2 & 6) 57-66 1951.

581.6 APPLIED BOTANY

cf. also 1514, 2397, 3060-3062, 3074, 3115

1109. BHATTACHARYYA, B., DATTA, A. & BARUAH, H. K., On the formation and development of Agaru in *Aquilaria agallocha* (Lett.) *Sci. & Cult.* **18** (5) 240-241, 1952.

1110. BEDI, RAMESH, Tulasi—the sacred plant of India. Is it foreign to the people of this country? *Indian For.* **78** (9) 440-441, 1952.

1111. BOSE, S. R., The role of injurious plants. *J. biol. Soc. Assam.* **1** (2) 7-12, 1951.

1112. KRISHNA, S. & BADHWAR, R. L., Aromatic plants of India. Pt. XV. (Supplement) Family Umbelliferae. *J. sci. industr. Res.* **11** (12) 245-266, 1952.

1113. MAHESHWARI, P., Some recent discoveries in applied Botany. *Everyday Sci.* **1** (1) 48-52, 1952.

1114. MASHOOD ALAM, S., Food plants of the desert locust. (Lett.) *Cur. Sci.* **21** (12) 344, 1952.

1115. NANJUNDAYYA, C., A note on the utilization of cotton seed. *Indian cott. grow. Rev.* **6** (3) 111-118, 1952.

1116. RAY, D. C., Agaves in India. *Jute Bull.* **15** (9) 384-387, 1952.

1117. SAMPATHKUMARAN, M. A., Role of algae in fish pond management. *Sci. & Cult.* **18** (5) 213-214, 1952.

581.8 PLANT HISTOLOGY

cf. also 1096

1118. DE SILVA, B. L. T., Secondary thickening in the roots of *Cycas*. *Proc. Ceylon Ass. Adv. Sci.* (8th Annu. Sess.) 26-27, 1952.

1119. DESIKACHARY, T. V., Electron microscope study of the diatom-wall structure. *J. sci. industr. Res.* **11B** (11) 491-500, 1952.

1120. DEVI, SHANTI, Studies in the order Parietales. III. Vascular anatomy of the flower of *Carica papaya* L., with special reference to the structure of the gynoecium. *Proc. Indian Acad. Sci.* **36B** (2) 59-69, 1952.

1121. MISRO, B., An anatomical peculiarity in rice (*Oryza sativa*). (Lett.) *Cur. Sci.* **21** (7) 187, 1952.

1122. PURI, V., Floral anatomy and inferior ovary. *Phytomorph.* **2** (2-3) 122-129, 1952.

1123. PURI, V., Floral anatomy in relation to taxonomy. *Agra Univ. J. Res.(Sci.)* **1**, 15-35, 1952.

1124. RAO, V. S., The floral anatomy of some Verbenaceae with special reference to the gynoecium. *J. Indian bot. Soc.* **31** (4) 297-315, 1952.

1125. SASTRI, R. L. N., Studies in Lauraceae - I. Floral anatomy of *Cinnamomum iners* Reinw and *Cassytha filiformis* Linn. *J. Indian bot. Soc.* **31** (4) 240-246, 1952.

1126. SRIVASTAVA, R. K., Wilt roll in grasses : II. Involution in *Eragrostis minor* Host and *E. pilosa* Beauv. (Lett.) *Sci. & Cult.* **18** (6) 283-284, 1952.

1127. VENKATA RAO, C., Floral anatomy of some Malvales and its bearing on the affinities of families included in the order. *J. Indian bot. Soc.* **31** (3) 171-203, 1952.

1128. WARDLAW, C. W., The effect of isolating the apical meristem in *Echinopsis*, *Nuphar*, *Gunnera* and *Phaseolus*. *Phytomorph.* **2** (4) 240-242, 1952.

PLANT CYTOGENETICS

cf. also 1086

1129. DATTA, R. M., Irregular meiosis in *Corchorus olitorius*. (Lett.) *Sci. & Cult.* **18** (3) 149, 1952.

1130. DIWAKARAN, K., KRISHNA RAO, P. & KRISHNASWAMY, V., "Eatless", a new Mendelian character in Ragi. (*Eleusine coracana* Gaertn.) (Lett.) *Cur. Sci.* **21** (7) 191-192, 1952.

1131. KARUNAIRATNAM, M. C. & BAPTIST, N. G., Free nuclei in coconut water. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 25, 1952.

1132. MUKHERJEE, S. K., Meiosis in some *Corchorus* spp. (Lett.) *Sci. & Cult.* **18** (2) 91, 1952.

1133. MUKHERJEE, S. K., Meiosis in *Azadirachata indica*. (Lett.) *Cur. Sci.* **21** (10) 287, 1952.

1134. PATEL, G. I., Chromosome basis of dioecism in *Trichosanthes dioica* Roxb. (Lett.) *Cur. Sci.* **21** (12) 343-344, 1952.

1135. PUSHKARNATH, Crossibility studies in the South American diploid species of the tuber-bearing Solanums. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 25-26, 1952.

1136. RAGHAVAN, T. S., Cytogenetics of sugarcane. *Indian J. agric. Sci.* **22** (Pt. I) 93-102, 1952.

1137. RANGANATHAN, B. & SUBRAMANIAN, M. K., Studies on the cytology of yeasts. VI. Lethal chromosomal mutations in yeasts. *J. Indian Inst. Sci.* **34A** (3) 235-251, 1952.

1138. SRINATH, K. V. & KUNDU, B. C., Cytological studies of pollen tube growth in reciprocal crosses between *Corchorus capsularis* and *C. olitorius*. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 27, 1952.

1139. SRINIVASAN, V. K., Chromosome numbers in the genus *Zizyphus*. (Lett.) *Cur. Sci.* **21** (8) 224-225, 1952.

581.9 PLANT GEOGRAPHY

cf. also 1086

1140. BANERJI, M. L., Observations on the distributions of Gymnosperms in Eastern Nepal. *J. Bombay natr. hist. Soc.* **50** (1) 156-159, 1952.

1141. BANERJI, M. L., Some noteworthy plants from East Nepal. *J. Indian bot. Soc.* **31** (3) 152-153, 1952.

1142. BELL, PHILIP SIDNEY, The ferns and fern allies of Rangoon-Insein area. *M. Sc. thesis. Univ. Rangoon*, 1952.

1143. BISWAS, K., Desert vegetation. *Bull. nat. Inst. Sci. India* **1**, 247, 1952.

1144. BURTON, R. W., The Linaloe tree (*Bursera delpechiana* Poisson) : An introduction into the flora of India. *J. Bombay natr. hist. Soc.* **51** (1) 116-120, 1952.

1145. GOVINDU, H. C., Occurrence of *Tilletia transvaalensis* in Mysore. (Lett.) *Cur. Sci.* **21** (8) 224, 1952.

1146. GOVINDU, H. C. & THIRUMALACHAR, M. J., Grass flora of Mysore. *Techn. Bull. No. 1, College of Agriculture, Hebbal, Bangalore*, 1952. Pp. 33

1147. KACHROO, P., The vegetation of liverworts in Assam. (Lett.) *Sci. & Cult.* **18** (6) 284-285, 1952.

1148. MISRA, R., The vegetation of Chatera. *Bull. bot. Soc. Univ. Saugar* **3** (1 & 2) 12-18, 1950-51.

1149. MITRA, R., The algal flora of certain Indian soils. *Indian J. agric. Sci.* **21** (Pt. 4) 357-373, 1951.

1150. MUKHERJEE, S. K. & NIRULA, R. L., Symposium on the Geography of Crop plants. *Proc. 39th Indian Sci. Congr. Pt. VI*, 126-127, 1952.

1151. PANDEYA, S. C., Flora of the University area and neighb. urhood I. Trees and shrubs. *Bull. bot. Soc. Univ. Saugar* **3** (1 & 2) 32-38, 1950-51.

1152. PANDE, S. K. & SRIVASTAVA, K. P., The hepatic vegetation of Panchmari (Madhya Pradesh). A preliminary survey. *J. Indian. bot. Soc.* **31** (4) 342-351, 1952.

1153. RAIZADA, M. B. & VAID, K. M., Ferns of Nepal. *Indian Forestr.* **78** (11) 576-581, 1952.

1154. RAO, C. B., On the distribution of algae in a group of six small ponds. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 25-26, 1952.

1155. RAZI, BASHEER AMHED, Some aspects of the vegetation of Poona and neighbouring districts. *J. Univ. Poona (Biol. Sect)* **1** (2) 1-57, 1952.

1156. SANTAPAU, H., The need for a revision of Hooker's "Flora of British India". *J. sci. industr. Res.* **11A** (12) 529-532, 1952.

1157. SANTAPAU, H., On a common species of *Curcuma* of Bombay and Salsette islands. *J. Bombay natr. hist. Soc.* **51** (8) 135-139, 1952.

1158. SENARATNA, J. E., *Salvinia* in Ceylon. *Trop. Agric.* **CVIII** (3) 194-195, 1952.

1159. SINHA, S., The vegetation of glacial moraines of the Pindari glacier, Kumaun, India. *Proc. nat. Acad. Sci. (India)* **21** (Pts. 2 & 6) 91-98, 1951.

1160. SREERAMULU, T., On a *Porphyra* from Waltair coast. (Lett.) *Sci. & Cult.* **18** (6) 285-286, 1952.

1161. VARMA, C. P., An algal flora from the Laki (Lower Eocene) beds of the Nammal gorge (Punjab Salt range). *Proc. nat. Inst. Sci. India* **18** (4) 301-308, 1952.

582 SYSTEMATIC BOTANY

582.2/3 CRYPTOGAMIA

1162. ABEYWICKRAMA, B. A. & DASSANAYAKE, M. D., *Crepidomanes bilabiatum* (Nees et Bl.) Copel, a fern new to Ceylon. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 25-26, 1952.

1163. DENNIS, R. W. G., The genus *Trogia* Fr in India. *Indian Phytopath.* **4** (2) 119-122, 1951.

1164. GOKHALE, V. P. & PATIL, B. P., Occurrence of a new race (No. 122) of *Puccinea graminis tritici* in Bombay State. (Lett.) *Cur. Sci.* **21** (9) 250, 1952.

1165. GOKHALE, V. P. & PATIL, M. K., *Kulkarniella*, a new genus of rusts. *Indian Phytopath.* **4** (2) 170-173, 1951.

1166. GONSALVES, ELLA A. & GANDHI, H. P., A systematic account of the diatoms of Bombay and Salsette. Pt. I *J. Indian bot. Soc.* **31** (3) 117-151, 1952.

1167. GOVINDU, H. C., Notes on some species of *Cercospora* from Mysore. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 27, 1952.

1168. GUPTA, S. C., An abnormal feature in the life-cycle of *Uromyces proeminens* (Dc) Lev on *Euphorbia hypericifolia* L. (Lett.) *Cur. Sci.* **21** (12) 348, 1952.

1169. HINGORANI, M. K., Selfing studies with race 7 of *Puccinea graminis avenae* Erikss. and Hann. *Indian Phytopath.* **4** (2) 141-143, 1951.

1170. PATEL, M. K., DHANDE, G. W. & KULKARNI, Y. S., Studies in some species of *Xanthomonas*. *Indian Phytopath.* **4** (2) 123-140, 1951.

1171. PRASAD, BRAJ NANDAN, Some *Nostocaceae* from Uttar Pradesh. *J. Indian bot. Soc.* **31** (4) 358-361, 1952.

1172. RAMAKRISHNAN, T. S., Observations on Ergots on *Pennisetum* and other grasses. *Proc. Indian Acad. Sci.* **36B** (3) 97-101, 1952.

1173. RAMAKRISHNAN, T. S., SRINIVASAN, K. V. & SUNDARAM, N. V., Additions to the fungi of Madras. XIII. *Proc. Indian Acad. Sci.* **36B** (2) 85-95, 1952.

1174. RAMAKRISHNAN, K. & SUBRAMANIAN, C. V., The fungi of India a second supplement. *J. Madras Univ.* **22B** (1) 1-65, 1952.

1175. RAMAKRISHNAN, K. & SUBRAMANIAN, C. V., The fungi of India -a second supplement. *J. Madras Univ.* **22B** (2) 163-182, 1952.

1176. SAFEEULLA, K. M., Species of the genus *Albugo* in India. (Lett.) *Sci. & Cult.* **18** (6) 282-283, 1952.

1177. SINHA, JWALA PRASAD, Notes on Indian hepatics (Lett.) *Cur. Sci.* **21** (11) 318-319, 1952.

1178. SUBRAMANIAN, C. V., Fungi isolated and recorded from Indian soils. *J. Madras Univ.* **22B** (2) 206-221, 1952.

1179. SUBRAMANIAN, C. V., Studies on South Indian Fusaria. II. Fusaria isolated from black cotton soils. *Proc. nat. Inst. Sci. India* **18** (6) 557-584, 1952.

1180. SUBRAMANIAN, C. V., Studies on South India Fusaria. I. *Fusarium vasinfectum* Atk., with a note on its varieties and forms. *Proc. nat. Inst. Sci. India* **18** (4) 273-285, 1952.

1181. SUBRAMANIAN, C. V., Fungi imperfecti from Madras I. *Proc. Indian Acad. Sci.* **36B** (2) 43-53, 1952.

1182. SUBRAMANIAN, C. V., Fungi imperfecti from Madras II. *Proc. Indian Acad. Sci.* **36B** (4) 160-168, 1952.

1183. SUBRAMANIAN, C. V., Fungi imperfecti from Madras III. *Beltraniella* gen. nov. *Proc. Indian Acad. Sci.* **36B** (6) 223-228, 1952.

1184. SUBRAMANIAN, C. V. & RAMAKRISHNAN, K., *Rostrospora*, a new genus of the Melanconiales. *J. Madras Univ.* **22B** (1) 66-68, 1952.

1185. A note on Assam hepatics (Lett.) *J. biol. Soc. Assam* **1** (2) 75, 1951.

582.4/9 PHANEROGAMIA

1186. ARGIKAR, G. P., *Solanum melongena* Var. *Bulsarensis* var *nora*. Argikar. (Lett.) *Cur. Sci.* **21** (8) 226-227, 1952.

BOTANY

1187. BOR, N. L., The genus *Poa* Linn. in India. Pt. II. *J. Bombay natr. hist. Soc.* **51** (1) 61-103, 1952.

1188. CHAKRAVARTY, H. L., Indian *Corchorus*. Linn. *Bull. bot. Soc. Bengal* **5** (2) 75-86, 1951.

1189. CHATTERJEE, D. & RANDHAWA, G. S., Standardised names of cultivated plants in India -II. Cereals, pulses, vegetables and pulses. *Indian J. Hort.* **9** (4) 64-84, 1952.

1190. CHATTERJI, D., Correct name of *Modecca apigulata* Masters. *Bull. bot. Soc. Bengal* **5** (2) 139, 1952.

1191. HEWETSON, C. E., Systematics and ecology of Indian plants or what can we demand of a modern flora. *J. Bombay natr. hist. Soc.* **51** (1) 140-144, 1952.

1192. PAL, B. P., RAMANUJAM, S. & MEMON, A. R., Evaluation of vegetative characters as classificatory aids in classifying crop plants : I. Leaf-hairiness in *Triticum*. *Indian J. Genet. & Plt. Breed.* **12** (1) 15-24, 1952.

1193. SANTAPAU, H., Contributions to the Bibliography of Indian Botany Pt. II. *J. Bombay natr. hist. Soc.* **51** (1) 205-269, 1952.

1194. VENKATESAN, K. R., A catalogue of the plants of the Botanic Gardens (University of Annamalai). *J. Annamalai Univ.* **16**, 110-114, 1951.

ZOOLOGY

GENERAL

1195. DOVER, CEDRIC, Zoology and culture. *Sci. & Cult.* **18** (5) 260-264, 1952.

1196. Catalogue of book in the Bombay Natural History Society's Library. Pt. VII--Natural History. *J. Bombay natr. hist. Soc.* **51** (1) 318-334, 1952.

1197. Notes on recent additions to the collections and new exhibits prepared in the Natural History Museum, Darjeeling since March 1st, 1952. *J. Bengal natr. hist. soc.* **25** (4) 200-203, 1952.

591.08 STUDIES. EXPERIMENTS

cf. also 1241

1198. MUKHERJI, S. & S. CHATTERJEE, S. N., A technique for determining accurately the areas of contact of the body of insects in locomotion with the ground surface. (Lett.) *Cur. Sci.* **21** (10) 285-286, 1952.

1199. PRASAD, RAGHU, Preliminary observations on the temperature gradients and light penetration in the upper 200 ft. of water of the Bay of Bengal. *Proc. Indian Acad. Sci.* **36A** (1) 61-69, 1952.

591.1 ANIMAL PHYSIOLOGY

cf. also 1241

1200. AIRAN, J. W. & JOSHI, J. V., Distribution of sulphur and nitrogen in *Sepia* and *Rhabdocynthia*. *J. Univ. Bombay* **21A** (N. S.) (Pt. 3) (32) 72-73, 1952.

1201. AIRAN, J. W. & JOSHI, J. V., Studies in Kolhapur fresh water fishes. Pt. V. *J. Univ. Bombay* **21A** (N. S.) (Pt. 3) (32) 69-71, 1952.

1202. AIRAN, J. W. & KALYANKAR, G. D., Guinea fowl egg fat. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 175-177, 1952.

1203. AIRAN, J. W. & POWAR, V. K., Studies in Kolhapur freshwater fishes. Pt. IV. *Shengalu, Ghogra, Tambar, Khawall, Wamb, Ahir.* *J. Univ. Poona (Biol. Sect.)* **1** (2) 1-6, 1952.

1204. BALAKRISHNAN, S. & RAJAGOPALAN, R., Studies on the influence of feeding milk and curd on the intestinal synthesis of Vitamin B₁ in rats. *Indian J. Physiol. & Alld. Sci.* **6** (4) 143-154, 1952.

1205. BANERJEE, SACHCHIDANANDA, GUHA, B. C., ROY-CHOUDHURI, S. P. & SEN, K. C., Symposium on animal nutrition and human nutrition in relation to crop planning in India. *Proc. 39th Indian Sci. Congr. Pt. IV*, 108-113, 1952.

1206. BHEEMESWAR, B. & SREENIVASAYA, M., Occurrence of transminase in the silkworm *Bombyx mori*, L. (Lett.) *Cur. Sci.* **21** (9) 253-254, 1952.

1207. BHU, HRISHI, Distribution of Vitamin "C" in the oogenesis of *Semnopithecus entellus*. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 1-5) 34-40, 1952.

1208. BURTON, R. W., Taste or smell in salmon. (Misc. note) *J. Bombay natr. hist. Soc.* **51** (1) 287-288, 1952.

1209. DANIEL, A., The respiratory mechanism of *Balanus tintinnabulum* L. *J. Madras Univ.* **22B** (2) 261-267, 1952.

1210. JHINGRAN, V. G., General length-weight relationship of three major carps of India. *Proc. nat. Inst. Sci. India* **18** (5) 449-460, 1952.

1211. JONES, S. & PANTUL, V. R., A remarkable case of albinism in the freshwater eel, *Anguilla bengalensis* Gray. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 285-286, 1952.

1212. KULKARNI, C. V., Growth of *Calla* in tanks. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 282-285, 1952.

1213. MAHALANOBIS, S. K. & ROY, R. N., Effect of fish protein (*Ophiocephalus punctatus beng-lata*) on the regeneration of haemoglobin. *Indian J. Physiol. Alld. Sci.* **6** (3) 120-124, 1952.

1214. NAIR, K. K., The chemical composition of the pectoral muscles of some Indian birds and its bearing on their flight. *J. Univ. Bombay* **21B** (N. S.) (Pt. 3) (32) 90-98, 1952.

1215. NAIR, K. K., The chemical composition of the pectoral muscles of some Indian birds and its bearing on their flight. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 36, 1952.

1216. OWERS, N., The occurrence and distribution of lipids in the placenta of the Indian musk shrew, *Crocidura caerulea*. *Proc. 39th Indian Sci. Pt. IV* (abstr.) 37, 1952.

1217. PRASAD, S. N., Site of synthesis of Vitamin C (Ascorbic acid) and its association with Golgi apparatus in the eggs of *Bos indicus* and *Bos bubalus*. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 2 & 6) 67-74, 1951.

1218. RANGNEKAR, P. V., A note on the colourless blood of the fresh water mussel, *Lamellidens lamellidens*. *J. Univ. Bombay* **21B** (N. S.) (Pt. 3) (32) 88-89, 1952.

1219. SHRIKHANDE, J. G. & PATHAK, A. N., A comparative study of the physico-chemical characters of the castings of different insects. *Indian J. agric. Sci.* **21** (Pt. IV) 401-408, 1951.

1220. SIVA SANKAR, D. V. & SARMA, P. S., Studies on Biotin: Pt. IV—Uric acid excretion in the rice moth larva (*Coryza cephalonica* St). (Lett.) *J. sci. industr. Res.* **11B** 394-395, 1952.

1221. SRIVASTAVA, KAILASH NATH, Some observation on the life processes of *Bruchus analis* Fib. with special reference to nutritional factors. *Proc. nat. Acad. Sci. (India)* **18B** (Pts. V & VI) 87-103, 1948.

1222. VENKATARAMAN, T. V. & GOVIL, M. L., Some effects of low temperature on the biology of *Trichogramma evanescens minutum* Riley in mass breeding. *Indian J. Entom.* **14**(3) 215-227, 1952.

1223. VISWANATHAN, R. & TAMPI, P. R. S., Oxygen consumption and viability of *Chanos chanos* (Forskal) in relation to size. *Proc. Indian Acad. Sci.* **36B** (4) 148-159, 1952.

591.3 ANIMAL EMBRYOLOGY

cf. also 1245

1224. BAPAT, S. V. & RAGHU PRASAD, R., On some developmental stages of *Caranx Kalla* Cuv. & Val. *J. Bombay natr. hist. Soc.* **51** (1) 111-115, 1952.

1225. PARKASH, B. ALIKUNHI, K. M., On the development of the grey mullet, *Mugil corsula* Hamilton. *J. zool. Soc. India* **4** (2) 123-140, 1952.

1226. SRIVASTAVA, SHYAMA CHARAN, Contribution to our knowledge of the structure of placenta of *Felis tigris*, the Indian tiger. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 36, 1952.

1227. SRIVASTAVA, SHYAMA CHARAN, Contribution to our knowledge of the placentation in *Rhinopoma Kinneari*. *Proc. 39th Indian Sci. Congr. Pt. VI* (abstr.) 36-37, 1952.

1228. SRIVASTAVA, SHYAMA CHARAN, Contributions to our knowledge of the structure of the placenta of *Panthera tigris tigris* (Linn). *Agra Univ. J. Res. (Sci.)* **1**, 36-45, 1952.

591.4 ORGANOLOGY. ANATOMY

cf. also 902

1229. ANANTHANARAYANA AYER, A. & MARIAPPA, D., A radiographic study of ossification in the Indian foetus. *J. anat. Soc. India* **1** (1) 3-10, 1952.

1230. BHATTI, I. H., On the cutaneous sense-organs of a common siluroid fish *Rita rita* (Hamilton). *Proc. nat. Inst. Sci. India* **18** (6) 547-556, 1952.

1231. GEORGE, J. C., A note on the cranial osteology of *Uromastyx Hardwickii* (Gray). *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 35, 1952.

1232. GEORGE, J. C. & UNNI, LAKSHMI, On the epaxial and caudal muscles of Sauropsida. *Proc. 39th Indian Sci. congr. Pt. IV* (abstr.) 35, 1952.

1233. KANAGASUNTERAM, R., Observations on the anatomy of the Hoolock Gibbon. *Ceylon J. Sci. (G)* **5** (Pt. I) 12-64, 1952.

1234. KRISHNAN, G., On the nephridia of Nereidea in relation to habitat. *Proc. nat. Inst. Sci. India* **18** (4) 241-255, 1952.

1235. MITRA, R. D., Occurrence of curiously modified spines of the palp of *Psychoda*. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 99-100, 1952.

1236. MYINT, SAW THA, Life history of *Dermocenys Pusillus* Kuhl and Vanhasselt from Inya lake. *M. Sc. thesis Univ. Rangoon*, 1952.

1237. NARAIN, DHARAN, Studies in the gametogenesis of fishes.—The yolk-nucleus of Balbiani. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 2 & 6) 75-90, 1951.

1238. NATH, VISHWA & SHARMA, GANPATI PRA-SHAD, The millipede sperm. *Res. Bull. East. Panjab Univ.* No. 22, 99-119, 1952.

1239. NATH, VISHWA, BAWA, SUKHDEV RAJ, BHARDWAJ, RAJKRISHAN & GUPTA, MANOHAR LAL, Sperm formation in certain Coleoptera with particular reference to chromosome numbers, acrosome and mitochondrial nebenkern. *Res. Bull. East. Panjab Univ.* No. 16, 39-50, 1951.

1240. PETER DEVASUNDARAM, M., Scale study of *Mugil cephalus*, Linnaeus of Chulka lake. *J. Madras Univ.* **22B** (1) 147-162, 1952.

1241. PRABHAKAR RAO, Y., On the life-history and biology of Indian neem mealy scale insect, *Pulvinaria maxima* (Green). *J. Sci. Res. Banaras Hindu Univ.* II, 171-188, 1951-52.

1242. PRAKASH, RAVI The radiographic demonstration of the mode of action of the heart of a lizard, *Uromastix Hardwicki* Gray. *Indian J. Rad.* 6 (4) 126-128, 1952.

1243. RAMASWAMI, L. S., Skeleton of cyprinoid fishes in relation to phylogenetic studies. III. The skull and other skeletal structures of homalopterid fishes. *Proc. nat. Inst. Sci. India* 18 (6) 495-517, 1952.

1244. RAMASWAMI, L. S., Skeleton of cyprinoid fishes in relation to phylogenetic studies IV. The skull and other skeletal structures of gastromyzonid fishes. *Proc. nat. Inst. Sci. India* 18 (6) 519-538, 1952.

1245. SINGH, R. N., The cercaria of *Plasmiorchis orientalis* Mehra (1934). *Proc. nat. Acad. Sci. (India)* 21B (Pts. 1-5) 61-71, 1952.

591.5 ANIMAL ECOLOGY. BIONOMY
cf. also 1233, 1300

1246. BETTS, F. N., Birds nesting on telegraph wires. (Misc. note). *J. Bombay natr. hist. Soc.* 5 (1) 271-272, 1952.

1247. BHIMACHAR, B. S. & GEORGE, P. C., Observations of the food and feeding of the Indian mackerel, *Rastrelliger candgurta* (Cuvier). *Proc. Indian Acad. Sci.* 36B (3) 105-118, 1952.

1248. CHACKO, P. I. & THYAGARAJAN, S., On the development and parental care in the Pontamond crab, *Paratelphusa (Barytelphusa) Jacquemontii* (Rathbun). (Misc. note). *J. Bombay natr. Soc.* 51 (1) 289-291, 1952.

1249. CHRISTENSEN, GLEN C., Overwintering of the Chukar partridge (*Alectoris graeca*) in Nevada, U. S. A. (Misc. note). *J. Bombay natr. hist. Soc.* 51 (1) 277-279, 1952.

1250. DONALD, C. H., Bird migration across the Himalayas. (Misc. note). *J. Bombay natr. hist. Soc.* 51 (1) 269-271, 1952.

1251. GEE, E. P., The great Indian one-horned Rhinoceros. *J. Bengal natr. hist. Soc.* 25 (4) 173-177, 1952.

1252. GEE, E. P., Extermination of snakes upsets balance of nature. (Misc. note). *J. Bombay natr. hist. Soc.* 51 (1) 280-281, 1952.

1253. GOPALAKRISHNAN, V., Food and feeding habits of *Penaneus indicus* M Ed. *J. Madras Univ.* 22B (1) 69-75, 1952.

1254. HIGGINS, J. C., Arrival dates of fantail and pintail snipe in Burma. (Misc. note). *J. Bombay natr. hist. Soc.* 51 (1) 280, 1952.

1255. JAYEWICKREME, S. H., Swarming and mating in mosquitoes with observations on *Taeniorhynchus unijormis* (Theobald). *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 29-30, 1952.

1256. JOHRI, L. N., A report on a Turbellaria *Placocephalus kewense*, from Delhi State and its feeding behaviour on the live earthworm, *Pheretima posthuma*. (Lett.) *Sci. & Cult.* 18 (6) 291, 1952.

1257. KRISHNASWAMY, A. K., A note on the nocturnal behaviour of *A. minimus* Theobald, 1901, in D. D. T.—sprayed huts in North Bengal. *Indian J. Malar.* (6) (1) 117-122, 1952.

1258. KURIYAN, G. K. Notes on the attachment of marine sedentary organisms on different surfaces. *J. zool. Soc. India* 4 (2) 157-171, 1952.

1259. LISTER, M. D., Some bird associations of Indian cultivated and waste lands. *J. Bombay natr. hist. Soc.* 51 (1) 19-28, 1952.

ZOOLOGY

1260. MACKENZIE, J. M. D., A note on some natural barriers in Burma. *J. Bombay natr. hist. Soc.* **51** (1) 189-199, 1952.

1261. MANJIL, A. J., A mantis in captivity. *J. Bengal natr. hist. Soc.* **25** (4) 184-188, 1952.

1262. MORRIS, R. C., Riotous behaviour of mating bears. (*Melursus ursinus*) charging. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 265-266, 1952.

1263. MORRIS, R. C., Cases of unwounded gaur or Indian bison (*Bibos gaurus*) charging (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 266, 1952.

1264. NORONHA, R. P., Wild buffaloes and tame. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 266-267, 1952.

1265. NORRIS, C. E., Notes on migrants, 1952. *Loris* **6** (2) 55-56, 1952.

1266. PANIKKAR, N. K. & PRASAD, R. R., On an interesting association of Ophiuroids, fish and crab with the jellyfish, *Rhopilema hispidum* (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 295-296, 1952.

1267. PHILLIPS, W. W., A Late stay of gargeny. *Loris* **6** (2) 56-57, 1952.

1268. PILLAY, T. V. R., A critique of the methods of study of food of fishes. *J. zool. Soc. India* **4** (2) 185-200, 1952.

1269. PRUTHI, H. S. & BHATIA, D. R., Peculiarities of the insect fauna of the Rajasthan desert and the share of insects in the maintenance of the desert. *Bull. nat. Inst. Sci. India* **1**, 241-245, 1952.

1270. ROONWAL, M. L. & GUPTA, S. D., An unusual royal chamber with two kings and two queens in the Indian mound-building termite *Odontotermes obesus* (Rambur) [Isoptera: Family Termitidae]. (Misc. note) *J. Bombay natr. hist. Soc.* **51** (1) 293-294, 1952.

1271. SENIOR WHITE, R. A., Studies on the bionomics of *Anopheles aquasalis* Curry, 1932. Pt. III. *Indian J. Malar.* **6** (1) 29-72, 1952.

1272. SUBBIAH PILLAY, B., Murrel vs Cobra. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 287, 1952.

1273. VISWANATHAN, D. K., RAO, T. R. & BHATIA, S. C., The validity of estimation of anopheles densities on the basis of hand collection on a timed basis from fixed catching stations. *Indian J. Malar.* **6** (2) 199-213, 1952.

1274. WEEREKOON, A. C. J. & FERNANDO, C. H., Food of the Cyprinid fish, *Puntius vittatus* (Day). *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* **27**, 1952.

1275. WEINMAN, AUBREY, Fish out of water *Loris* **6** (2) 48-50, 1952.

1276. WEINMAN, AUBREY N., Elephants and wood apples. *Loris* **6** (2) 64-65, 1952.

591.6 APPLIED ZOOLOGY

1277. DISSANAIKE, A. S., Acephaline gregarines of the Ceylon earthworm, *Pheretima peguana*. *Proc. Ceylon Assoc. Adv. Sci. (8th Annu. Sess.)* **28**, 1952.

1278. HARRIS, K. (Mrs.), Vegetable extracts and male toad reaction. (Lett.) *Cur. Sci.* **21** (12) 345, 1952.

1279. KAPUR, N. S., VISWANATHA, Y. & MATHUR, P. B., Rat feeding trials with cereals preserved with mercury. *Bull. cent. food techn. Res. Inst. Mysore* **2** (3) 74-75, 1952.

1280. PHYTHIAN-ADAMS, E. G., Some jungle pests and remedies. *J. Bengal natr. hist. Soc.* **25** (4) 193-196, 1952.

1281. SELVARAJ, C. J., Notes on the biology of *Rodolia netara* Kapur (Coccinellidae : Coleoptera) a predator of *Pericerya purchasi* (Maskell) (Coccidae : Homoptera). *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 2 & 6) 51-55, 1951.

1282. SOHI, GURCHARAN SINGH, Biology of the "woolly bear" (*Anthrenus vorax* Waterhouse). *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 2 & 6) 99-105, 1951.

591.69 PARASITOLOGY

cf. also 1311, 1312, 1320, 1323

1283. AYYAPPA, P. K. & CHEEMA, P. S., An ectoparasite on the larvae of *Anthrenus vorax* Waterhouse. *Proc. Indian Acad. Sci.* **36B** (5) 215-222, 1952.

1284. KARVE, J. N., Some parasitic nematodes of fishes III. *J. Univ. Bombay* **21B** (N. S.) Pt. 3 (32) 1-14, 1952.

1285. KURIYAN, G. K., A note on the parasitic isopod, *Cymothoa eremita* Bruennich. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 291-293, 1952.

1286. MITRA, R. D., Parasites of *Phlebotomus*. *Proc. 39th Indian Sci. Congr.* (abstr.) Pt. IV, 99-100, 1952.

591.8 ANIMAL CYTOGENETICS

1287. GHOSH, ASOK, Histological studies of bovine adrenal cortex. *Indian J. Physiol. & Alld. Sci.* **6** (3) 125-129, 1952.

1288. PRASAD, S. N., Behaviour of mitochondria in the oogenesis of *Bos indicus*, *Bos bubalus* and *Oris Vignei*. *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 2 & 6) 106-118, 1951.

1289. SRIVASTAVA, UMA SHANKER, Cytoplasmic inclusions in the oogenesis of *Sternolophus decens* Zaitzev and *Sitophylus oryzae* Linn. (Coleoptera). *Proc. nat. Acad. Sci. India* **19B** (Pts. V & VI) 65-82, 1949.

1290. WESLEY, W. K., Cytoplasmic inclusions in the oogenesis of *Atractomorpha crenulata* Fb. *Proc. nat. Acad. Sci. India* **21B** (Pts. 1-5) 43-59, 1952.

591.9 ZOOGEOGRAPHY

1291. CANTLIE, KEITH, More butterflies of the Khasi and Jaintia hills. *J. Bombay natr. hist. Soc.* **51** (1) 42-60, 1952.

1292. DILGER, WILLIAM C., The Brij hypothesis as an explanation for the tropical faunal similarities between the Western Ghats and the Eastern Himalayas, Assam, Burma and Malaya. *Everyday Sci.* **1** (1) 38-40, 1952.

1293. GEE, E. P., India's vanishing fauna. *J. Bengal natr. hist. Soc.* **25** (4) 178-182, 1952.

1294. GEE, E. P., Possible occurrence of the snub-nosed monkey, (*Rhinopithecus roxellanae*) in Assam. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 264-265, 1952.

1295. HORA, SUNDER LAL, Recent advances in fish geography of India. *J. Bombay natr. hist. Soc.* **51** (1) 170-188, 1952.

1296. HORA, SUNDER LAL & MENON, A. G. K., Distribution of Indian fishes of the past and their bearing on the geography of India. *Everyday Sci.* **1** (1) 26-37, 1952.

1297. HORA, SUNDER LAL & SILAS, E. G., Evolution and distribution of Glyptosternoid fishes of the family Sisoridae (Order: Siluroidea). *Proc. nat. Inst. Sci. India* **18** (4) 309-322, 1952.

1298. INGLIS, C. M., Birds of the Duars (contd.). *J. Bengal natr. hist. Soc.* **25** (4) 196-200, 1952.

1299. KURIAN, C. V., On the occurrence of crangonids (Crustacea, Caridea) in the coastal waters of Trivandrum. (Lett.) *Cur. Sci.* **21** (11) 316, 1952.

1300. LOKE, W. T., Kashmir revisited. *J. Bombay natr. hist. Soc.* **51** (1) 121-127, 1952.

1301. PATIL, A. M., Study of the marine fauna of the Karwar coast and neighbouring islands. Pt. III. *J. Bombay natr. hist. Soc.* **51** (1) 29-41, 1952.

1302. PRASAD, R. R., BAPAT, S. V. & TAMPI, P. R. S., Observations on the distribution of plankton at six inshore stations in the gulf of Manaar. *J. zool. Soc. India* **4** (2) 141-151, 1952.

1303. SAMUEL RAJ, J., An aquatic glow-worm from Alleppey. (Lett.) *Cur. Sci.* **21** (8) 222, 1952.

1304. WEERKOON, A. C. J. & SAMARASINGHE, E. L., The microfauna of the soil of a paddy field in the South-Western wet zone of Ceylon, near harvest time. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* **23**, 1952,

592/599 SYSTEMATIC ZOOLOGY

594 MOLLUSCA

1305. SUBRAHMANYAM, T. V., KARANDIKAR, K. R. & MURTI, N. N., Marine Gastropoda of Bombay—Pt. II. *J. Univ. Bombay* **21B** (N. S.) (Pt. 3) (23) 26-73, 1952.

595 ARTICULATA

VERMES

TREMATODES

1306. GUPTA, S. P., Studies on the trematode parasites of food fishes of U. P., A new trematode, *Macrotrema macroni* n. gen. n. sp. from the intestine of a fresh water fish, *Macrones carasius* (Ham) of the sub-family, Leptophallinae Dayal 1938. *Indian J. Helminth.* **3** (2) 101-108, 1952.

1307. MEHRA, H. R., Evolution of the Strigeid trematodes and blood flukes. (Presidential address). National Academy of Sciences, India, Pp 9-38, 1949.

1308. SAMUEL, MARY (Miss), A new species of Coelomic trematode of the genus *Staphylorchis* from the Tiger shark, *Galeocerdo tigrinus* from Indian waters. *Proc. Indian Acad. Sci.* **36B** (4) 169-179, 1952.

NEMATODES

1309. KAW, B. L., Studies in Helminthology : Helminth-parasites of Kashmir Pt. II. Acanthocephala. *Indian J. Helminth.* **3** (2) 117-132, 1951.

1310. KHERA, S., *Trichuris cynocephalus* n. sp. (Family Trichinellidae Stiles and Crane, 1910: Nematoda) from the Abyssinian bamboo, *Cynocephalus hamadaryas* Linn. *Indian J. Helminth.* **3** (2) 87-92, 1951.

1311. KHERA, S., *Thubunaea quadridentata* n. sp. (Sub-family Physalopterinae Railliet, 1893: Family Physalopteridae Leiper, 1908: Nematoda) from the wall lizard, *Hemidactylus flaviviridis*. *Indian J. Helminth.* **3** (2) 111-116, 1951.

1312. SANWAL, K. C., On a new avian nematode, *Habronema thapari* n. sp. (sub family Spirurinae, Railliet, 1915) from the blue Jay, *Coracias benghalensis*. Linn. *Indian J. Helminth.* **3** (2) 79-86, 1951.

1313. SANWAL, K. C., On a new avian nematode, *Dispharynx pavonis* n. sp. (sub-family Acuarinae, Railliet, Henry and Sisoff, 1912.) from the peafowl, *Pavo cristatus*. *Indian J. Helminth.* **3** (2) 73-78, 1951.

1314. SINGH, S. M., Host plants of *Heterodera marioni*. (Cornu, 1879) Goodey, 1932 in the Uttar Pradesh. *Indian J. Helminth.* **3** (2) 109-110, 1951.

1315. TANDON, R. S., On a new amphistome, *Oliveria bosi* n. sp. from the rumen of buffalo, *Bos bubalis* from Lucknow. *Indian J. Helminth.* **3** (2) 93-100, 1951.

595.4/7 BRACHIATA, CRUSTACEA

1316. ANATHAKRISHNAN, T. N., Notes on some Thysanoptera from South India. *Indian J. Entom.* **14** (3) 197-201, 1952.

1317. KEVAN, D. K. M., New species of *Ramakrishnaia* I. Bol. from the Nilgiris (Orthoptera, Acrididae). *Indian J. Entom.* **14** (3) 269-272, 1952.

1318. KRISHNASWAMY, S., A new species of Harpacticoid copepod from Madras plankton. *J. zool. Soc. India* **4** (2) 173-175, 1952.

1319. KURIAN, CHANDY, Descriptions of four new and record of one known Bethyloidea (parasitic Hymenoptera) from India. *Agra Univ. J. Res. (Sci.)* **1**, 63-72, 1952.

1320. KURIAN, CHANDY, Four new species of Chalcidoidea (parasitic Hymenoptera) from India. *Agra Univ. J. Res. (Sci.)* **1**, 55-62, 1952.

1321. MATHUR, R. N., A new species of bat-bug *Aphraniola* from Dehra Dun (Cimicidae : Hemiptera). *Indian J. Entom.* **14** (3) 257-261, 1952.

1322. MITRA, R. D., A discussion on the subgeneric position of *Phlebotomus*. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 98-99, 1952.

1323. MUKERJI, S., On a new species of Scelionidae *Scelio oviphagus* sp. nov. (Serphoidea—Proctotrypoidea: Hymenoptera) parasitic on eggs of *Hieroglyphus nigrorepletus* I. Bol in Ajmer. *Indian J. Entom.* **14** (3) 203-213, 1952.

596/599 VERTEBRATA

1324. SEBASTIAN, V. O., A new species of Synascidian from Madras. (Lett.) *Cur. Sci.* **21** (11) 316-317, 1952.

597.6 AMPHIBIA

1325. KIRTISINGHE, P., The Ceylonese frogs and toads of the families Ranidae and Bufonidae. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 28, 1952.

598.1 REPTILIA

1326. EKAMBARANADHAN, M., Pambugal (Snakes) (Tamil). Publ: M. Swaminadhan, Madras. 1952. Re. 1/- Pp VI+40.

1327. THOMAS SATYAMURTI, S., A giant among snakes. *J. Bengal natr. hist. Soc.* **25** (4) 188-193, 1952.

598.2 AVES

1328 ABDULALI, HUMAYUN, Finn's Baya (*Ploceus megarhynchus* Hume). *J. Bombay natr. hist. Soc.* **51** (1) 200-204, 1952.

1329. DILLON RIPLEY, S., *Musicapa Westermanni Indochinensis*. A synonym of *M. W. Australorient* (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 272, 1952.

1330. KINNEAR, NORMAN, The history of Indian mammology and ornithology. Pt. II. Birds. *J. Bombay natr. hist. Soc.* **51** (1) 104-110, 1952.

1331. KOELZ, W. N., New races of Assam birds. *J. zool. Soc. India.* **4** (2) 153-155, 1952.

1332. MEINERTZHAGEN, R., A new bird for India—*Montifringilla davidiana pontanini* (Shushkin) Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 273-274, 1952.

1333. NORRIS, C. E., The curlew and whimbrel. *Loris* **6** (2) 56, 1952.

1334. PHILLIPS, W. W. A., The Indian cuckoo—*Cuculus micropterus* in Ceylon. (Misc. note.) *J. Bombay natr. hist. Soc.* **51** (1) 274-275, 1952.

1335. SUBBIAH PILLAY, B., A granivorous green pigeon. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 275-276, 1952.

1336. TYABJI, FARID H. B., The great Indian bustard. (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 276-277, 1952.

599 MAMMALIA

cf also 1330 history of mammalogy.

1337. PURVES, D. C., A young serow. *J. Bengal natr. hist. Soc.* **25** (4) 182-184, 1952.

608 PATENTS

1338. SUBRAMANIAM, V., Patent, its law and practice. *J. Madras Inst. Techn.* **1** (1) 133-136, 1952.

61 MEDICAL SCIENCES

GENERAL

1339. RAINA, B. L., The Asvins. *J. Army med. Corps India* **8** (3) 149-152, 1952.

1340. BHARARA, S. S., Social medicine and its importance. *J. Indian med. Ass.* **21** (11) 478-480, 1952.

1341. GREVAL, S. D. S., Fireside fantasies. *Indian med. Gaz.* **87** (12) 561-563, 1952.

611 ANATOMY

1342. BASU, D. P., Study of mast cells in human subjects with relation to atheroma, heparin and cholesterol. *Indian Heart J.* **4** (2) 65-71, 1952.

1343. CHACKO, L. W., A note on the occurrence of pre-spondylolisthesis of the fifth lumbar vertebra. *J. anat. Soc. India* **1** (1) 28, 1952.

1344. CHACKO, L., The blood supply of the lateral geniculate body in relation to its functional areas in man. *J. anat. Soc. India* **1** (1) 11-13, 1952.

1345. CHATTERJEE, HIREN, Accessory liver. *J. anat. Soc. India* **1** (1) 14-20, 1952.

1346. GOVINDA REDDY, D., Undiluted bone marrow studies in health and disease. *Indian J. med. Sci.* **6** (7) 424-428, 1952.

1347. MISRA, B. D., Ileo-cecal junction. *Clinic Soc. J. (Med. Coll. Lucknow)* **36** (3) 13-15, 1952.

1348. NARAYANASWAMY, T. The intrapelvic branch of the obturator nerve and contribution of the obturator nerve to the hip joint. *J. anat. Soc. India* **1** (1) 21-24, 1952.

1349. ROY CHAUDHURI, AHINDRA NATH, Some anatomical peculiarities found in a cadaver for dissection. *J. anat. Soc. India* **1** (1) 29, 1952.

1350. SOWRI, SARAH J. (Mrs.), A morphological and pelvimetric study of the South Indian female pelvis. *J. anat. Soc. India* **1** (1) 25-27, 1952.

1351. VAKIL, RUSTOM JAL, Proposal for a new anatomical classification of congenital cardiovascular anomalies. *Indian Heart J.* **4** (3) 157-161, 1952.

612 PHYSIOLOGY

1352. GOOD, M. G., Pain-pathophysiology and clinical significance. *Indian med. Rec.* **72** (11) 252-261, 1952.

PHYSIOLOGY OF THE CELL

1353. SHAH, PRABHAKAR N., Cytology of human vagina in certain hormonal disturbances. *Indian J. med. Sci.* **6** (10) 683-695, 1952.

1354. WAHI, P. N. & MEHTA, URMILA, Vaginal cytology in ovulatory and anovulatory cycles. *Indian J. med. Sci.* **6** (8) 477-486, 1952.

IMMUNITY, ANAPHYLAXIS, ALLERGY, TOXINS ETC.

1355. BANERJEE, RAMENDRA NATH, An introduction to the phenomenon of "Allergy". *Calcutta med. J.* **49** (10) 395-403, 1952.

1356. BANERJI, BISHNUPADA, A case of allergic shock following injection of Vitamin B₁ (Lett). *J. Indian med. Ass.* **21** (10) 457, 1952.

1357. CHAVDA, H. H., Unusual type of ether susceptibility. *Indian med. Gaz.* **87** (9) 407-408, 1952.

1358. LAHIRI, D. C. & MORE, V. Y., Naturally developed Diphtheria antitoxin titre of a random population. *Indian med. Gaz.* **87** (10) 448-449, 1952.

1359. MUKHERJEE, B. B. & CHATTERJEE, K., Anaphylactoid symptoms in a baby due to sucking of milk from the mother in anaphylactic shock. *J. Indian med. Ass.* **22** (1) 26-27, 1952.

1360. PALMER, CARROLL E., Geographic variations in sensitivity to tuberculin. *J. Indian med. Ass.* **21** (12) 509-510, 1952.

1361. SADASIVAN, T. S. LAKSHMINARAYANAN, K., SANJIVI, K. S., SUBRAMANIAN, R. & KRISHNASWAMY, N., Studies in allergic asthma. Pt I. Hypersensitivity to field beans (*Dolichos*) and house dust. *Indian J. med. Res.* **40** (3) 373-385, 1952.

1362. Allergy and anaphylaxis (editorial) *Calcutta med. J.* **49** (10) 405-410, 1952.

HORMONES

1363. BASU, U. P., The hormones of the adrenal medulla. *Indian J. med. Sci.* **6** (8) 487-491, 1952.

1364. MUKHERJI, B., Chemistry in hormone research. *Souv. Instn Chem. (India)* 128-136, 1952.

1365. RANADIVE, KAMAL J., Hormonal factor in breast carcinoma. *Indian J. med. Sci.* **6** (11) 792-805, 1952.

1366. VAID, V. B., Steroids in diseases of adaptation. *Indian J. med. Sci.* **6** (12) 889-898, 1952.

COMPARATIVE PHYSIOLOGY

1367. GHARPURE, P. V. & JHALA, H. I., The ratio of the body weight to the weights of the organs. Pt. IV. The kidneys, the spleen, liver, lungs, pancreas, pituitary, suprarenals, the thyroid and testes. *Indian med. Gaz.* **87** (11) 487-491, 1952.

BLOOD BIOCHEMISTRY

1368. CHAKRAVARTY, K. P., Estimation of iodine in blood and plasma protein. (Lett) *Sci. & Cult.* **18** (3) 151-152, 1952.

1369. DHAR, S. K., Choline esterase of blood in leprosy. *Indian J. Physiol. & Alld. Sci.* **6** (3) 130-136, 1952.

1370. GUPTA, T. C., Blood pressure studies in progressive coarctation of the aorta. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr)* 53, 1952.

1371. KOCH, A. C. E., The blood groups of Ceylonese with special reference to the Rh factor. *Ceylon J. Sci. (G)* **5** (Pt. 1) 1-9, 1952.

1372. KRISHNA RAO, A., Blood group characteristics in South Indians. (Lett) *Cur. Sci.* **21** (7) 188, 1952.

1373. MAITI, AJIT & MUKHERJEE, J. N., Haematological studies of alloxan diabetic rats. *Indian J. Physiol. & Alld. Sci.* **6** (4) 161-167, 1952.

1374. MATHUR, S. N. & TANDON, H. C., Pressure receptors in arterial branches. *Proc. Indian Sci. Congr. Pt IV (abstr)* 52, 1952.

1375. MOOKERJEE, G. C., A physical fitness test in terms of cardio-vascular reserve. *Def. Sci. J.* **2** (2 & 3) 126-133, 1952.

1376. SEN, NARENDRA NATH, Blood groups in pulmonary tuberculosis. *Calcutta med. J.* **49** (12) 476-482, 1952.

1377. SWAMY, T. V. & DUTTA, B. B., An easy way of determining corpuscular values by the use of a line chart. *Indian med. Gaz.* **87** (7) 300-302, 1952.

RESPIRATION

1378. MATHUR, S. N., Double role of respiration. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr)* 51, 1952.

1379. MATHUR, S. N. & CHOWDHURY, M. S., Reflex control of respiration. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr)* 51-52, 1952.

METABOLISM

1380. AGARWAL, P. N., Role of Vitamin B₆ in amino acid metabolism. *J. Indian med. Ass.* **21** (12) 517-520, 1952.

1381. DATTA, P. K. & RAJAGOPAL, K., Studies on metabolism of Vitamin A. Pt. I Vitamin A and urine. *Indian J. med. Res.* **40** (4) 487-494, 1952.

1382. NANDI, D. N., Studies in the schizophrenic metabolism. A study of liver function by Quick et al (1938) Benzoic acid test. *Indian J. med. Res.* **40** (3) 303-311, 1952.

1383. RUDRA, M. N., Manganese metabolism. (Lett) *Cur. Sci.* **21** (10) 281-282, 1952.

DIGESTION. PHYSIOLOGY OF NUTRITION

1384. ANSARI, M. Y., Vitamin B deficiency in presenting some unusual clinical features. *Indian Physn.* **11** (8) 173-177, 1952.

1385. BALAKRISHNAN, S. & RAJAGOPALAN, R., Studies on the influence of supplementation of curd to the poor South Indian diet on the intestinal synthesis of Vitamin B₁ in rats. *J. Indian Inst. Sci.* **34A** (3) 229-234, 1952.

1386. GHOSH, NARESH CHANDRA, Vitamin C in the etiology of diabetes. (Discussion) *Proc. 39th Indian Sci. Congr. Pt IV* 114-115, 1952.

1387. GOPALAN C. & VENKATACHALAM, P. S., The pathogenesis of nutritional edema. *Indian J. med. Sci.* **6** (10) 713-719, 1952.

1388. KOCHAR, B. D., Nutrition—the citizen's responsibility. *Everyday Sci.* **1** (1) 64-69, 1952.

1389. KRISHNAMURTHY, K., Streptogenin in nutrition. *Indian J. Physiol. & Alld. Sci.* **6** (3) 107-111, 1952.

1390. MATHUR, S. N. & SHARMA, A. S., Further observations on "Colon gastric reflex". *Proc. 39th Indian Sci. Congr. Pt. IV (abstr)* 52, 1952.

1391. RAMALINGASWAMI, V. & SINCLAIR, H. M., The relation of Vitamin A deficiency to epithelial hyperplasia of the forestomach in the rat. *Indian J. med. Sci.* **6** (10) 708-712, 1952.

1392. ROY, B. R. & ROY, GOURANGA, Vitamin K in liver function tests of rats taking ethyl gallate. *Indian J. Physiol. Alld. Sci.* **6** (4) 168-171, 1952.

1393. SAHA, HIRALAL & DAS, AMALANANDA, Observations on the nature of cholera stools. *J. Indian med. Ass.* **21** (11) 464-467, 1952.

1394. SANKARARAMAN, S., Vitamins and detection of their early deficiency. *Antisep.* **49** (9) 672-682, 1952.

1395. SARMA, P. S., Antivitamins in the biochemical and physiological study of vitamin function. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr)* 53, 1952.

1396. SENGUPTA, P. C., SANYAL, N. N. BHATTACHARYYA, B. & MATHEN, K. K., Avitaminosis in Kala Azar. *Indian med. Gaz.* **87** (10) 444-448, 1952.

1397. SENGUPTA, P. N., Response of serum carotene and Vitamin A to variations in level of dietary carotenoids and the effect of storage on the stability of these nutrients of blood serum. *Indian J. med. Res.* **40** (3) 431-437, 1952.

1398. UDUPA, K. N., Protein deficiency in surgical patients—recognition and management. *Indian J. med. Res.* **6** (7) 456-468, 1952.

MEDICAL SCIENCES

1399-1418

1399. VENKITASUBRAMANIAN, T. A. & DE, S. S., The comparative nutritive value of a few oils and fats. *Indian J. Physiol. & Alld. Sci.* **6** (3) 115-119, 1952.

1400. VIJAYARAGHAVAN, P. K. & PATWARDHAN, V. N., The influence of poor rice diet on livers of albino rats. *Indian J. med. Sci.* **6** (10) 696-707, 1952.

1401. Nutrition and Dietetics. (editorial) *J. Indian med. Ass.* **21** (12) 525, 1952.

GLANDS AND SECRETION

1402. SAHA, HIRALAL & SENGUPTA, K. P., Body fluid distribution and antidiuretic hormone in urine in different types of oedema. *J. Indian med. Ass.* **22** (1) 1-6, 1952.

1403. SEN, P. B. & BHATTACHARYA, G., Protection against alloxan diabetes by glucose. *Indian J. Physiol. & Alld. Sci.* **6** (3) 112-114, 1952.

1404. SINGH, INDER, Albumin, casts, blood cells in urine in the absence of kidney disease. *J. Army med. corps India* **8** (3) 126-134, 1952.

ORGANS OF MOVEMENT

1405. SINGH, SUNITA INDERJIT & SINGH, INDERJIT, Action of drugs and ions on unstriated muscle. *Agra Univ. Res. (Sci.)* **1**, 185-188, 1952.

1406. SINGH, SUNITA INDERJIT & SINGH, INDERJIT, Active relaxation of unstriated muscle. (Lett.) *Cur. Sci.* **21** (10) 283-285, 1952.

REPRODUCTION AND DEVELOPMENT

cf. also 580, 581

1407. DESAI, LALITA M., Leucorrhoea in general practice. *Antisep.* **49** (12) 918-921, 1952.

1408. NIEMINEVA, KALEVI, A study of factors influencing fertility of prostitutes. *Int. J. Sex.* **6** (2) 77-83, 1952.

1409. RABOCH, JAN & POPELKA, STANISLAW, Masculine sterility caused by agencies of ductus deferens. *Int. J. Sex.* **6** (2) 65-69, 1952.

1410. SANYAL, S. N., Sterility effect of *Pisum sativum*—Biological study. *Calcutta med. J.* **49** (9) 354-359, 1952.

1411. STIEVE, H., The effect of the nervous system on organs of reproduction. *Int. J. Sex.* **6** (1) 21-23, 1952.

613.2 FOOD AND DIET

cf. also 672.59

FEEDING ETC.

1412. GOVIL, K. K., Clinical assessment of the nutritional status of school boys in Uttar Pradesh. *Indian med. Gaz.* **87** (12) 567-573, 1952.

1413. KRISHNA RAO, K. V. (Miss) & DE, S. S., Feeding experiments on infants and toddlers with soya milk and cow milk. *Indian J. Physiol. & Alld. Sci.* **6** (4) 172-177, 1952.

1414. LAL, S. B., Dietary study of agricultural landless labourers of Bhabhua, Bihar. *J. Indian med. Ass.* **22** (3) 101-105, 1952.

1415. LAL, S. B., Consumption level in some food scarcity areas of Bihar. *Indian J. med. Res.* **40** (3) 455-467, 1952.

1416. NUTRITION RESEARCH LABORATORIES, COO-NOR, S. India. Annual report for 1951-52, Pp. 28.

1417. PHILLIPSZ, G. L. C., VENKITASUBRAMANIAM, T. A. RAJAGOPALAN, R. & DE, S. S., Soya bean milk—Feeding experiments with army boys. *J. Army med. corps India* **8** (4) 199-210, 1952.

1418. RAY SARKAR, B. C., NATH, H. & ACHARYA, H. K., Problems of feeding the Army forces. *Def. Sci. J.* **2** (1) 18-25, 1952.

MEDICAL SCIENCES

1419. ROMINGER, ERICH, Feeding the newly born in the light of the new researches on the subject. *J. Obst. & Gyaaec.* **13** (11) 205-222, 1952.

FOODS. NUTRITIVE VALUE

1420. BALASUBRAMANIAN, S. C. & RAMACHANDRAN, M. M., Essential amino-acid composition and biological value of some cereal proteins. *Proc. Soc. biol. chem. (India)* **10**, 23-24, 1952.

1421. DAS, G. B., Measurement of heat values of food in Indian weights. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr) 53-55, 1952.

1422. DE MEL, BEATRICE & BAPTIST, N. G., Nutritive trials on cereal-legume vegetable diets. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 4-5, 1952.

1423. ESH, G. C., Choline in nutrition and therapy. *Antisep.* **49** (10) 750-756, 1952.

1424. FATTARPEKAR, PREMA & CHITRE, R. G., The nutritive value of groundnut oil and the hydrogenated groundnut oil. *Indian Physn.* **11** (11) 240-250, 1952.

1425. GIRI, K. V., Groundnut proteins. *Proc. Soc. biol. chem. (India)* **10**, 27, 1952.

1426. KUPPUSWAMY, S. & SUBRAHMANYAN, V., The supplementary value of certain oil seed cake proteins to the proteins of rice and wheat. *Proc. Soc. biol. chem. (India)* **10**, 28-29, 1952.

1427. LAL, B. M. & DE, S. S., Balancing the vegetable proteins. *Proc. Soc. biol. chem. (India)* **10**, 26-27, 1952.

1428. LAL, B. M., RAJAGOPALAN, R. & DE, S. S., Influence of calcium on the supplementary value of oil cake to the poor South Indian diet. (Lett.) *Sci & Cult.* **18** (4) 193-194, 1952.

1429. LAL, S. B., The effect of pressed ground nut cake flour in supplementing rice diet. *Indian J. med. Res.* **40** (4) 471-479, 1952.

1430. MURTHY, H. B. N., SWAMINATHAN, M. & SUBRAHMANYAN, V., Supplementary value of groundnut cake to tapioca and sweet potato. *Proc. Soc. biol. chem. (India)* **10**, 29-30, 1952.

1431. NANDI, D. K., RAJGOPALAN, R. & DE, S. S., Studies on the nutritive value of vegetable milk. (Lett) *Sci & Cult.* **18** (4) 199, 1952.

1432. NANDI, D. K. & RAJAGOPALAN, R., Amino-acid make-up of vegetable milk. (Lett) *Cur Sci.* **21** (9) 250-251, 1952.

1433. PHATAK, S. S. & PATWARDHAN, V. N., Nutritive value of Iso-oleic acids. *J. sci. industr. Res.* **11B** (12) 533-537, 1952.

1434. RAJAGOPALAN, R., Soyabean proteins. *Proc. Soc. biol. chem. (India)* **10**, 31-32, 1952.

1435. ROY, D. K., & GUHA, B. C., Proteins from green leaves. *Proc. Soc. biol. chem. (India)* **10**, 34-35, 1952.

1436. SAHASRABUDHE, M. R. & LAKSHMINARAYAN RAO, M. V., Nutritive value of vegetable proteins in relation to liver protein regeneration and maintenance. *Proc. Soc. biol. chem. (India)* **10**, 22-23, 1952.

1437. SIDDAPPA, G. S. & BHATIA, B. S., Nutritive value of Banegara fruit. *Randia dumetorum* Lam.) *Bull. centr. food techn. Res. Inst. Mysore* **2** (1) 16, 1952.

1438. SUBRAMANIAM, N. & SRINIVASAN, M., Vegetable protein from a new source, *Amaranthus paniculatus* Linn.: Its nutritive value. *Proc. Soc. biol. chem. (India)* **10**, 25-26, 1952.

1439. SUBRAMANIAN, N., SUR. B. K. & SUBRAMANYAN, V., On the role of tamarind and chilli in the rice diet. (Lett.) *Cur. Sci.* **21** (7) 190-191, 1952.

1440. SUBRAMANIAN, N., LAKSHMINARAYAN RAO, M. V. & SRINIVASAN, M., Nutritive value of the seed proteins of *Sesbania grandiflora* Pers. (Lett.) *Cur. Sci.* **21** (12) 339-340, 1952.

1441. SUBRAHMANYAN, V., Fat and lean years—a study of the problem of food shortage in India. *J. Sci. industr. Res.* **11A** (10) 437-439, 1952.

1442. SUR. B. K. & SUBRAHMANYAN, V., Availability of calcium in lucerne and its value in nutrition. *Indian J. med. Res.* **40** (4) 481-486, 1952.

1443. SUR. B. K. & SUBRAHMANYAN, V., Nutritive value of lucerne proteins. *Proc. Soc. biol. chem. (India)* **10**, 35, 1951.

1444. VENKITASUBRAMANIAN, T. A. & DE, S. S., A practical approach to the nutritional problem in India—Fortification of rice. *J. biol. Soc. Assam* **1** (2) 16-20, 1951.

1445. VISWANATHA, T. & DE, S. S., Role of trypsin inhibitor in soybean. *Proc. Soc. biol. chem. (India)* **10**, 30-31, 1952.

613.5 HOUSING HYGIENE

1446. WICKRAMARATNA, P. H. D., Conditions necessary for human comfort in the tropics with special reference to houses in Ceylon. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess)* 20-21, 1952.

613.6 OCCUPATIONAL HYGIENE, INDUSTRIAL HYGIENE

1447. BOSE, S. K., A study of accident prone personnel amongst tram and bus drivers in Calcutta. *Indian J. med. Res.* **40** (4) 569-583, 1952.

1448. CHATTERJEE, H., Jute dust as a potential health hazard. *Indian J. Tex.* **62** (744) 749, 1952.

1449. CHIEF ADVISER FACTORIES, NEW DELHI, Occupational diseases. A guide to recognition and notification. 1952. Pp. 83. Ministry of Labour. Govt. of India. Re. 1/-, Ish. 6d. Available: Manager of Publications, Civil Lines, Delhi.

1450. MARWAHA, G. S., Silicosis and pneumokonioses. *Bull. geol. min. & metallur. Soc. India* **11**, 61-64, 1952.

613.8 HYGIENE OF THE NERVOUS SYSTEM AND IN RELATION TO MORALS ETC.

1451. ALLEN, CLIFFORD, The problems of homosexuality. *Int. J. Sex.* **6** (1) 40-42, 1952.

1452. BLACKER, C. P., Sterilization and the law in Great Britain. *Int. J. Sex.* **6** (2) 70-72, 1952.

1453. CLARK, LEMON, A further report on the virginity of unmarried American women. *Int. J. Sex.* **6** (1) 27-32, 1952.

1454. ELLIS, ALBERT, DOORBHAR, RUTH R. & CLARK, LEMON, A study of sexual preferences: Preliminary report. *Int. J. Sex.* **6** (2) 87-88, 1952.

1455. GUZE, HENRY & GUZE, VIVIAN, Relationships of estrogens and androgens to certain aspects of sexual behaviour—A review. *Int. J. Sex.* **6** (2) 91-106, 1952.

1456. HOLIMANN, W., The sexuality of the tuberculous patient. *Int. J. Sex.* **6** (2) 84-86, 1952.

1457. LANVAL, MARC, Obscene books and law in Belgium. *Int. J. Sex.* **6** (1) 33-35, 1952.

1458. NIEMINEVA, KALEVI & YLINEN, OLLI, The new law concerning therapeutic abortion in Finland. *Int. J. Sex.* **6** (1) 43-46, 1952.

1459. REDDY, D. J., Artificial insemination—its medico-legal and social aspects. *Antisep.* **49** (9) 693-696, 1952.

1460. SMITT, JARL WAGNER, Homosexuality in a new light. *Int. J. Sex.* **6** (1) 36-39, 1952.

1461. VIGMAN, FRED K., Sexual precocity of young girls in the United States. *Int. J. Sex.* **6** (2) 89-90, 1952.

1462. WARNER, HUGH, Sex and marriage. *Int. J. Sex.* **6** (1) 47-49, 1952.

614 PUBLIC HEALTH

1463. HEALTH OFFICER, CALCUTTA CITY CORPORATION, Is Calcutta marching towards better health (Report for 1949-50) *J. Sci. Club* **6** (2) 86-20, 1952.

614.2/3 OFFICIAL AND PROFESSIONAL ORGANISATION :

HEALTH INSPECTION

1464. ALL-INDIA INSTITUTE OF HYGIENE & PUBLIC HEALTH, CALCUTTA. Report of the All India Institute of Hygiene and Public Health, Calcutta for 1949-51, Pp 71.

1465. ANWIKAR, A. K., The Public health services in the U. S. A. *Antisep.* **49** (10) 763-772, 1952.

1466. BHATTACHARYYA, J. K., Public health in the medical curriculum. *J. Indian med. Ass.* **22** (3) 112-116, 1952.

1467. BISWAS, RADHABENODE, School boys health, a grave and far reaching problem of the day. How to solve it. *Calcutta med. J.* **49** (10) 392-395, 1952.

1468. EAST PUNJAB, PUBLIC HEALTH DEPARTMENT, Report on Public health administration for the year 1949. Pp 386.

1469. KHURANA, B. D., Medical appreciation. *J. Army med. corps India* **8** (4) 233-235, 1952.

1470. MEHTA, P. M., The Physician's ideal and code of ethics in the golden age of Ayurveda. *Antisep.* **49** (12) 933-942, 1952.

1471. MCLELLAN, JEAN M., Present principles of hospital sterilization. *J. Christ. med. Ass. India etc.* **27** (4) 200-204, 1952.

1472. PASTEUR INSTITUTE OF SOUTH INDIA, COONOOR, Annual Report of the Director together with the 45th Annual Report of the Central Committee of the Pasteur Institute, Association 1951-52 and Scientific Report 1952. Pp 63.

1473. RIZVI, M. A. & RAO, M. N., Ten years experience of the successful working of the first health insurance scheme amongst Indian factory workers. *J. Indian med. Ass.* **21** (10) 434-436, 1952.

1474. SHAMA RAO, A., A review of the anti-leprosy organization and work in Hyderabad State. *Lepr. India* **24** (4) 178-181, 1952.

1475. SINGH, JASWANT, Courses in malariology at the Malaria Institute of India, Delhi. *Indian J. Malar.* **6** (1) 1-27, 1952.

1476. SITARAMAYYA, PATTABHI, The doctor and his family. *Antisep.* **49** (7) 507-512, 1952.

1477. Symposium on administrative problems of Child Health organizations. *Indian J. Ped.* **11** (76) 176-197, 1952.

1478. Dental National Associations of the World. *Indian Dent. Rev.* **21** (12) 604, 1952.

1479. Dental Schools and examining bodies in United Kingdom, America, India. *Indian Dent. Rev.* **21** (12) 601-603, 1952.

614.4 PREVENTION OF INFECTIOUS DISEASES.
MEASURES

1480. ADHIKARI, A. K. & GAGULI, N., A note on the effect of proguanil suppression in addition to other control measures on the Bengal Nagpur Railway stations. *Indian J. Malar.* **6** (2) 133-137, 1952.

1481. DAKSHINAMURTHY, S., Planning malaria control in multipurpose projects. *Irrig. & Power J.* **9** (1) 122-124, 1952.

1482. DIRECTORATE-GENERAL OF HEALTH SERVICES NEW DELHI, WHO/UNICEF assisted BCG vaccination campaign. Monthly report for April & June 1952. *Indian med. Gaz.* **87** (9) 325-326, 1952. **87** (9) 422-423, 1952.

1483. HENDERSON, JOHN M., Irrigation and mosquitoes in the United States of America. *Indian J. Malar.* **6** (1) 73-116, 1952.

1484. NEOGY, B. P., Malaria control measures in Tilaiya and Konar reservoirs. *Indian J. Powr. & Riv. Vall. Develpt.* (DVC. No.) 43-44, 1952.

1485. RAMAN, K. VENKATA & KANNIVELU, P. D., The rationale and the technique of BCG vaccination. *Antisep.* **49** (7) 513-524, 1952.

1486. SUBRAMANIAN, R. & VAID, B. K., Some observations on rural malaria control using residual insecticides in wettable powder form. *Indian J. Malar.* **6** (2) 215-218, 1952.

614.7 HYGIENE OF SOIL, WATER AND AIR POLLUTIONS

1487. PILLAI, S. C., The special significance of certain peritrichous ciliate protozoa in aerobic purification of sewage. *Indian med. Gaz.* **87** (9) 411-414, 1952.

1488. VENKATARAMAN, D., Some aspects of air pollution. *Sci. & Cult.* **18** (2) 69-71, 1952.

615 PHARMACY. THERAPEUTICS

1489. CHATTERJI, S. K., Contributions of chemists to problems of public analysts. *Souvenir Instn. Chem. (India)* 160-170, 1952.

1490. SRIVASTAVA, P. C., The Haemopoietic system. *Indian Pharm.* **7** (11) 536-537, 1952.

1491. Misuse of wonder drugs. (editorial, *Indian med. Gaz.* **87** (12) 577-578, 1952.

PHARMACOLOGY

ORGANIC MATERIA MEDICA

cf also 1597

1492. BALAKRISHNA RAO, S., Saponins (Saponinins) from Indian medicinal plants. I. Saponinins from Asparagus. *Indian J. Pharm.* **14** (7) 131-132, 1952.

1493. BANERJEE, H. K., Cyano-cobalamin Vitamin B₁₂. *Indian J. Pharm.* **14** (7) 133-136, 1952.

1494. BOSE, AJAY KUMAR, The story of Cortisone. *Sci. & Cult.* **18** (6) 264-266, 1952.

1495. BOSE, A. N. & BOSE, SRIPATI, Studies on arsenoxide derivatives. Pt. II. Pharmacology of amidino-arsenoxides. *Indian J. med. Res.* **40** (4) 517-528, 1952.

1496. GANGADHARAM, P. R. J., NARAYANAMURTHY, N. L. & IYER, B. H., Anti-tubercular activity of Sesamin. (Lett.) *Cur. Sci.* **21** (9) 246-247, 1952.

1497. GANGULY, S. K., Proteins of pituitary (posterior) lobe extract: Reactivity against 2:6 Dichlorophenol indophenol. *Indian J. Physiol. Alld. Sci.* **6** (4) 155-160, 1952.

1498. GANGULY, S. K. & BHATTACHARYA, RABINDRANATH, Proteins of pituitary (posterior) lobe extract. Effect of irradiation as observed by ultraviolet absorption spectra. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 163-166, 1952.

1499. GHOSH, T. N., Preparation of some substituted thio carbamide derivatives. *Indian J. Pharm.* **14** (8) 151-152, 1952.

MEDICAL SCIENCES

1500. GUHA, SUJIT KUMAR & CHAKRAVORTY, RANES, Effect of spirochin hydro-iodide on surgical and infective cases. *J. Indian med. Ass.* **22** (3) 97-99, 1952.

1501. ISWARIAH, V. & VENKATA SUBBU, V. S., Pharmacological study on a group of 4-Piperidone derivatives for their spasmolytic properties. (Lett.) *Cur. Sci.* **21** (9) 248-249, 1952.

1502. LANE, ROGER, The uses of Hexamethonium. *J. Indian med. Ass.* **21** (12) 513-517, 1952.

1503. MOHAN RAO, V. K., KRISHNA MURTI, C. R. & SHRIVASTAVA, D. L., Enzyme inhibition studies in relation to drug action. II—Action of certain antibiotics on papain. *J. sci. industr. Res.* **11B** (7) 299-302, 1952.

1504. MUKHERJEE, SURATH KUMAR, Study of a new modified insulin. (Type N. P. H.) *Indian med. Gaz.* **87** (11) 516-519, 1952.

1505. PRADHAN, V. G., The uses of *Mycobacterium carotinogen* in studies on liver extracts. *Indian. J. Pharm.* **14** (9) 171-172, 1952.

1506. RAJAPURKAR, M. V., Antihistamine drugs in general practice. *J. Indian med. Res.* **22** (2) 54-59, 1952.

1507. RAMA RAO, R. & GANGASHARAM, P. R. J., A note on the estimation of ascorbic acid in plasma. *Indian J. Pharm.* **14** (10) 192, 1952.

1508. RATHNASABAPATHY, V. & ISWARIAH, V., The pharmacology of gigantin. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt II) 151-160, 1952.

1509. RAYCHAUDHURY, A. K., Toxicity of thiamine hydrochlor. *J. Indian med. Ass.* **22** (1) 27-28, 1952.

1510. SINGH, JASWANT, RAGHAVAN, N. G. S. MISRA, B. G., KRISHNASWAMY, A. K., & ROY, RADHAGOVINDA, A note on the ascicidal value of Hetrazan. *Indian med. Gaz.* **87** (8) 353-356, 1952.

1511. SRIVASTAVA, G. P. & KRISHNAMURTHY N., Extraction studies on Asvagandha—(*W. somnifera*) *Indian Pharm.* **8** (2) 57-60, 1952.

1512. TIPOD, J. M., Steroids and tumours. *Calcutta med. J.* **49** (7) 276-277, 1952.

1513. VAN KLAVEREN F. W. & SHRIVASTAVA, P. C., The lead anaemia in the rabbit and the potency of liver extracts. *Indian J. med. Res.* **40** (4) 495-504, 1952.

SEROLOGY, BACTERIOTHERAPY, VACCINE THERAPY.

IMMUNIZATION

1514. BANKER, D. D., Antibody patterns against certain viruses. *Indian. Physn.* **11**(10) 221-222, 1952.

1515. GOVINDAN, K. K. & RADHAKRISHNA RAO, M. V., Studies on lipotropic factors Pt. I. Choline content of the serum in normal and in patients suffering from cirrhosis of the liver. *Indian J. med. Res.* **40** (4) 505-510, 1952.

1516. GREVAL, S. D. S., Serological technique: Immunotherapy. VI. Poliomyelitis. *Indian med. Gaz.* **87** (9) 408, 1952.

1517. LAHIRI, D. C., Treatment of allergic state with the anti human serum floccule. *J. Indian med. Ass.* **22** (2) 41-45, 1952.

1518. RAJAGOPALAN, V. R. & ISRAIL, M., Laboratory experiments and field trials with vaccines from Sterne's avirulent anthrax strains. *Indian Vet. J.* **29** (3) 171-186, 1952.

1519. RAO, R. S., Immunizing potency against variola of strains of "vaccinia virus seeds" used in India for the preparation of vaccine lymph. *Indian J. med. Res.* **40** (3) 341-351, 1952.

1520. RAO, R. S., Purification of vaccine lymph. *Indian J. med. Res.* **40** (3) 353-360, 1952.

1521. SINGH, BNARANJAN, Duration of potency of L. A. B. vaccine. *Indian J. med. Res.* **40** (3) 313-315, 1952.

1522. SINHA, S. N., A method of producing pure and potent vaccine lymph from sheep. *Indian J. med. Res.* **40** (3) 327-339, 1952.

HAEMATOLOGY. BLOOD GROUPS

also 1371, 1372, 1373, 1376

1523. BIRD, G. W. G., Plant anti-A blood grouping reagents: Extracts of *Phaseolus lunatus* and *Dolichos biflorus* compared. *Indian J. med. Res.* **40** (4) 585-586, 1952.

1524. SENGUPTA, DWIJENDRANATH, Eosinophilia in tuberculosis. *Calcutta med. J.* **49** (7) 273-275, 1952.

PRACTICAL PHARMACY. PREPARATION OF MEDICINES ETC.

1525. AFFONSO, A. & KHORANA, M. L., Hydropathic suppository bases. Pts I & II. *Indian J. Pharm.* **14** (11) 209-212, 1952; **14** (12) 229-232, 1952.

1526. BASU, N. K. & BALIGA, B. P., The stability of liniment turpentine. B. P. *Indian J. Pharm.* **14** (6) 170-171, 1952.

1527. BHATTACHARYA, SUKHAMOY, Oil in Pharmacy. *Indian J. Pharm.* **7** (11) 533-535, 1952.

1528. NARAYANRAO, U. B., Indigenous medicinal specialities. Publ: Medical Digest, Bombay 4. Pp 304. (1st ed).

1529. SCHROFF, M. L., The elements of physico-chemical calculations for students of science and pharmacy. Publ. Pindars Ltd., 7 Lower Rawden Str. Calcutta 20. Pp 242. 1952.

PHARMACOGNOSY

also 1511

1530. ACHARI, G. & LAL, S. V., Investigation on indigenous drugs. *Polyalthia longifolia*. *Indian Pharm.* **7** (11) 538-545, 1952.

1531. BOSE, A. N., & BOSE, S., A study on *Digitalis lanata* Ehrh. grown in India. *Indian J. Pharm.* **14** (10) 189-191, 1952.

1532. GUHA, M. P., On the histological distribution of alkaloids in the Indian *Mahonia* species. *Indian Pharm.* **7** (12) 576-580, 1952.

1533. SESHAGIRI RAO, R., Scientific comments on the note on comparative pharmacognostic studies on *Datura fastuosa* L. and *D. fastuosa* var. *alba* Nees by P. C. Sarbadhikary and Krishna Sen Gupta. *Indian Pharm.* **7** (10) 479-480, 1952.

1534. SRIVASTAVA, G. P. & KRISHNAMURTHY, N., Standardization of Asvagandha (*Withania somnifera*). *Indian Pharm.* **8** (2) 52-56, 1952.

INDUSTRIAL MANUFACTURE OF MEDICINE ETC.

1535. BHATTACHARYA, SUKHAMOY & BASU, U. P., On the problems of standardization of glass containers for pharmaceutical use. *Indian Pharm.* **7** (10) 447-448, 1952.

1536. DIXIT, G. K., Pharmaceutical industry in the U. S. *Indian J. Pharm.* **14** (12) 232-235, 1952.

1537. DUCKWORTH, ALLEN, The British Pharmaceutical Industry and the National Health Service. *Indian Pharm.* **8** (3) 87-89, 1952.

1538. FOSTER, G. E., Standards and quality control in the British Pharmaceutical Industry. *Indian Pharm.* **8** (3) 90-91, 1952.

1539. HOBDAY, G. I., Pharmaceuticals and the British Patents Acts. *Indian J. Pharm.* **14** (8) 160-167, 1952.

1540. ROY, P., On the testing of containers used in the pharmaceutical industry. *Indian J. Pharm.* **7** (10) 467-470, 1952.

1541. SEN, S. P., Glass containers in pharmaceutical industry. *Indian Pharm.* **7** (10) 456-457, 1952.

1542. SINGER, J. H., Packaging in the British Pharmaceutical Industry. *Indian Pharm.* **8** (3) 94-97, 1952.

MEDICAL INSTRUMENTS. APPARATUS

1543. CHOWDRY, P. P., The "Flying fox". *J. Army med. corps India* **8** (4) 227-232, 1952.

1544. MODY, K. P., Instruments and technic. (editorial) *Indian J. Rad.* **6** (3) 68-70, 1952.

1545. RAMAMURTHI, B., The Ophthalmoscope in general practice. *Antisep.* **49** (11) 834-836, 1952.

615.7 CHEMOTHERAPY

1546. ANTIA, F. P. & SIDHVA, J. N., The antihistamine drugs. *Indian J. med. Sci.* **6** (7) 429-440, 1952.

1547. ISWARIAH, V., Progress in Therapeutics 1951. *Indian J. med. Sci.* **6** (12) 901-930, 1952.

1548. NARAYAN, B. A., A new era in the drug treatment of leprosy. *Antisep.* **49** (10) 773-779, 1952.

1549. WILLIAMS, J. F. R., British research in chemotherapy with special emphasis on progress in tropical medicine. *Indian Pharm.* **8** (3) 92-93, 1952.

1550. New developments in therapeutics. *Indian Physn.* **11** (7) 157-162, 1952.

ACTING ON CIRCULATORY SYSTEM

1551. PRAYAG, V. S., Digitalis in cardiology. *Antisep.* **49** (9) 665-671, 1952.

1552. SWIFT, H. B. & MALHOTRA, CHAMANLAL. The effect of Digitalis on the coagulation time of blood. *Indian med. Gaz.* **87** (12) 559-560, 1952.

1553. Drug therapy in hypertension. (editorial) *Indian med. Ass.* **22** (3) 121-122, 1952.

ANTHELMINTHICS

1554. BHADURI, N. V. & SANYAL, P. K., Cashew nut (*Anacardium occidentale*) shell oil as an anthelmintic in human helminthiasis—a preliminary note. *Indian med. Gaz.* **87** (12) 573-575, 1952.

ANTIPYRETICS. ANTI-RHEUMATIC. ANTI-MALARIALS

cf. also 620-623, 634, 653 anti-malarials

1555. CHAUDHURI, R. N. & CHAKRAVARTY, N. K. A preliminary note on the prophylactic value of fortnightly doses of camoquin in malaria. *Indian med. Gaz.* **87** (10) 453-454, 1952.

1556. DATTA, ASOKE GOPAL & BASU, U. I. Studies on the action of anti-malarial drugs on enzym systems. Pt. I—Succinic hydrogenase. (Lett.) *J. sci. industr. Res.* **11B** (10) 451, 1952.

1557. PATEL, J. C. & DEMELLO, E. R., Antimalarials in amoebiasis. *Indian Physn.* **11** (11) 238-239, 1952.

1558. RAY, A. P., BASU, P. C. & SINGH, JASWANT. Prophylactic trial with lapinone against *P. gallinaceum* in fowls. *Indian J. Malar.* **6** (2) 159-162, 1952.

1559. SINGH, JASWANT, RAY, A. P., BASU, P. C. MISRA, B. G., Effect of parenteral administration antimalarials in simian malaria. *Indian J. Malar.* **6** (2) 163-173, 1952.

1560. SINGH, JASWANT, BASU, P. C. & RAY, A. Screening of antimalarials against *P. gallinaceum* chicks. Pt. I. *Indian J. Malar.* **6** (2) 145-158, 1952.

1561. SINGH, JASWANT, BASU, P. C. & RAY, A. Prophylactic trials against *P. gallinaceum* in fowls. *Indian J. Malar.* **6** (1) 122-132, 1952.

DISINFECTANTS, ANTISEPTIC, INSECTICIDES

1562. BHATIA, S. C., An exposure cell for use in residual insecticidal studies on mosquitoes. *Indian J. Malar.* **6** (2) 139-143, 1952.

1563. MALLIK, N. C. & MUKERJI, B., Bactericidal properties of ointments and liquid antiseptics for surface applications. *Indian J. Pharm.* **14** (8) 148-150 1952.

1564. PAL, RAJINDAR, The relationship between the physical forms of D. D. T. and their biological effectiveness on solid surfaces. *Indian J. Malar.* **6** (3) 239-250, 1952.

1565. PAL, RAJINDAR, Dieldrin for malaria control. *Indian J. Malar.* **6** (3) 325-330, 1952.

1566. PAL, RAJINDAR, The distribution of insecticides on sprayed surface and specifications for stirrup pump sprayers. *Indian J. Malar.* **6** (3) 343-353, 1952.

1567. PAL, RAJINDAR, MCCAULEY, ROBERT H. & FAY, RICHARD W., The relationship between the physical forms of D. D. T. and their biological effectiveness of water surfaces. *Indian J. Malar.* **6** (3) 225-238, 1952.

1568. PAL, RAJINDAR & SHARMA, M. I. D., Rapid loss of biological effectiveness of D. D. T. applied to mud surfaces. *Indian J. Malar.* **6** (3) 251-262, 1952.

1569. PAL, RAJINDAR & SHARMA, M. I. D., Micro-bioassay method for D. D. T. *Indian J. Malar.* **6** (3) 275-280, 1952.

1570. PAL, RAJINDAR & SHARMA, M. I. D., Behaviour of mosquitoes in relation to insecticidal applications. *Indian J. Malar.* **6** (3) 281-301, 1952.

1571. PAL, RAJINDRA, SHARMA, M. I. D. & KRISHNAMURTHY, B. S., Studies on the development of resistant strains of house flies and mosquitoes. *Indian J. Malar.* **6** (3) 303-316, 1952.

1572. PAL, RAJINDAR, SHARMA, M. I. D. & KRISHNAMURTHY, B. S., Toxicity of synthetics and natural pyrethrins incorporating synergists against mosquitoes. *Indian J. Malar.* **6** (3) 331-341, 1952.

1573. SHARMA, M. I. D. & PAL, RAJINDAR, Comparative field studies on the residual effectiveness of D. D. T., B. H. C., D. D. T. and B. H. C. combined spray and Dieldrin against mosquitoes. *Indian J. Malar.* **6** (3) 317-324, 1952.

1574. SINGH, JASWANT & PAL, RAJINDAR, Organic synthetic insecticides employed in malaria control. *Indian J. Malar.* **6** (3) 219-223, 1952.

1575. TRIMURTI, T. S., Insecticides of different kinds and the necessity for their manufacture in India. *Indian Pharm.* **7** (12) 588-589, 1952.

1576. VISWANATHAN, D. K., Analysis of residual deposits of D. D. T. on sprayed surfaces. *Indian J. Malar.* **6** (3) 265-273, 1952.

BACTERIOSTATIC, ANTIBIOTIC SUBSTANCES

cf also 1560.

1577. ACHARI, G., Some principles of antibiotic therapy. *Patna J. Med.* **26** (4) 157-158, 1952.

1578. AHUJA, PARMANAND, The value of antibiotics in treatment. *Antisep.* **49** (10) 792-794, 1952.

1579. BHAT, J. V. MEHTA, SUBHADRA & GEORGE, MARIAM, Studies on Indian medicinal plants. I. An antibacterial substance from the fruit of *Thespesia populnea* Soland. *J. Univ. Bombay* **21B** (N. S.) (Pt. 3) (32) 15-20, 1952.

1580. CHOPRA, I. C., GUPTA, K. C. & NAZIR, B. N., Preliminary study of antibacterial substances from *Melia azadirachta*. *Indian J. med. Sci.* **40** (4) 511-515, 1952.

1581. DAVID, JOHN G., Misuse of streptomycin—its results. *Antisep.* **49** (8) 628-636, 1952.

1582. DE, S. N. BHATTACHARYYA, K. & RAY-CHAUDHURY, P. K., *In vitro* study of the actions of terramycin and chloromycezin against *Vibrio cholerae*. (preliminary report) *Calcutta med. J.* **49** (9) 360-361, 1952.

1583. DUDANI, A. T. & AGARWALA, S. C., A medium for the assay of antibiotics from indigenous materials. (Lett.) *J. sci. industr. Res.* **11B** (12) 551-552, 1952.

1584. GUHA SIRCAR, S. S. & ROUT, MAHENDRA KUMAR, Preparation of antibacterials from organo-mercurials. Pt. VI. Mercurated amines. *J. Indian chem. Soc.* **29** (10) 779-782, 1952.

1585. GUJRAL, M. L., Tuberculosis therapy. *Clinic. Soc. J. (Med. Coll. Lucknow)* **36** (3) 1-7, 1952.

1586. GUPTA, SHANTI PARKASH., Observation on the antibacterial properties of garlic. *J. Indian med. Ass.* **21** (10) 430-433, 1952.

1587. JOSEPH, A. D. & PATEL, V. A., Chemotherapy of tuberculosis. *Antisep.* **49** (7) 536-539, 1952.

1588. KURUP, P. A. & NARASIMHA RAO, P. L., Antibiotic principle from *Moringa pterygosperma* Pt. I. Purification. *J. Indian Inst. Sci.* **34A** (3) 219-227, 1952.

1589. MEHTA, SUBHADRA & BHAT, J. V., Studies on Indian medicinal plants. II. *Bryophyllum*, a new antibacterial substance from the leaves of *Bryophyllum calycinum* Salisb. *J. Univ. Bombay* **21B** (N. S.) (Pt 3) 21-25, 1952.

1590. MISRA, VINAY S. & KHARE, MAHESHWARI P., Possible antituberculous compounds. Pt. I. Preparation of acyl diphenyllamides. *J. Indian chem. Soc.* **29** (9) 695-697, 1952.

1591. MODI, C. J., Isonicotinic acid hydrazide (Isoniazid) in tuberculo--Review. *Indian J. med. Sci.* **6** (7) 441-455, 1952.

1592. NARASIMHA RAO, R. L. & VERMA, S. C. L., Antibiotic principle of *Allium sativum*—The structure of Allicin: Preparation and properties of Diphenyl disulphide oxide. *J. Indian Inst. Sci.* **34A** (4) 315-321, 1952.

1593. NARASIMHA RAO, P. L. & VERMA, S. C. L., A note on subcutaneous toxicity of Morellin and its suitability for topical applications. (Lett.) *Cur. Sci.* **21** (8) 219, 1952.

1594. RANGASWAMI, S. & SANKARA SUBRAMANIAN, S., Lichens and antibiotic activity. *Indian J. Pharm.* **14** (11) 214-215, 1952.

1595. ROY CHOWDHURI, A. K., CHAUDHURY, ANIL & CHADHA, V. N., Report of a study of the value of antibiotics in cholera. *Antisep.* **49** (9) 717-724, 1952.

1596. ROY CHOWDHURY, DILIP KUMAR, Chemotherapy of tuberculosis. *Sci. & Cult.* **18** (5) 207-212, 1952.

1597. SIRSI, M., KALE, LEELA (Miss) NATARAJAN, S. & NAYAK, U. B., Studies on the antimicrobial activity and pharmacological properties of some essential oils, extracted from locally cultivated plants. *J. Indian Inst. Sci.* **34A** (3) 261-267, 1952.

1598. SURI, J. C. & BHATIA, A. L., Anti-tubercular activity of "Isoniazid" Iso-nicotinic acid hydrazide. (Nydrasid) *Indian J. med. Res.* **40** (4) 587-605, 1952.

1599. ZAINI, K. R., Role of streptomycin in plague. *Antisep.* **49** (7) 560-562, 1952.

1600. More about death after chloramphenicol—its abuse and use in therapeutics. (editorial) *Calcutta med. J.* **49** (11) 435-436, 1952.

1601. Hazards of Chloramphenicol and precautions necessary for its use. (editorial) *Calcutta med. J.* **49** (9) 371-372, 1952.

1602. The current status of Isonicotinic acid hydrazides—in the treatment of tuberculosis. (editorial) *Antisep.* **49** (10) 805-806, 1952.

1603. Isonicotinic acid hydrazide (editorial) *Indian med. Gaz.* **87** (10) 461-462, 1952.

ACTING ON NERVOUS SYSTEM, ANAESTHETICS, NARCOTICS

1604. KONAR, N. R. SENGUPTA, A. N. & MITRA, S. N., Intramuscular paraldehyde. *Indian med. Gaz.* **87** (11) 499-504, 1952.

1605. ROYAN, M. J., Hyoscine hydrobromide as a cure for morphine addiction. *J. Christ. med. Ass. India etc.* **27** (6) 313-314, 1952.

1606. SIRSI, M. LOUDON, M. & WERNER, G., Action of diethylaminoethylphenothiazine (2987 R. P., Diparcol) and myanesin on tone and reflex regulating centres of the nervous system. *Cur. Sci.* **21** (12) 333-334, 1952.

615.8 VARIOUS CURATIVE METHODS

cf. also 10, 17, 23

1607. CHAND, KHAZAN & ARORA, B. C., Pleural effusion in artificial pneumothorax with special reference to seasonal variation. *J. Indian med. Ass.* **21** (11) 467-472, 1952.

1608. CHATTERJEE, SUSHIL, Physio-pathological basis of collapse therapy in the treatment of pulmonary tuberculosis. *Calcutta med. J.* **49** (7) 277-279, 1952.

1609. DEB, A. K., Modified electroshock therapy. *Indian J. Neur. Psych.* **3** (4) 375-379, 1952.

1610. DEB, A. K., On shock and psychotherapy of mental patients. *Calcutta med. J.* **49** (10) 404-405, 1952.

1611. DESHMUKH, P. L., Intravenous iron therapy with saccharated iron oxide. *Indian med. Gaz.* **87** (7) 287-292, 1952.

1612. GOVINDASWAMY, M. V., The use of indigenous drugs in psychological medicine. *Antisep.* **49** (7) 533-535, 1952.

1613. MADHAVA RAO, K., Ultra-violet therapy. *Antisep.* **49** (8) 617-621, 1952.

1614. MITRA, SUBODH, Radiation therapy in cancer of the cervix. *Indian J. Rad.* **6** (4) 113-119, 1952.

1615. MUJAVAR, I. K., Intensified electric convulsive treatment. *Indian J. Neur. Psych.* **3** (3) 227-231, 1952.

1616. PILLAY, A. P., Common sense therapy of male sex disorders. *Int. J. Sex.* **6** (1) 15-20, 1952.

1617. RAKSHIT, BITHIKA (Miss) Seeds of *Ocimum* plants and other mucilage producing ones used in India as household remedies. *Indian Pharm.* **7** (12) 586-587, 1952.

1618. REIDER, NORMAN, Clinical notes on the defense structure in psychotherapy. (Bibliography) *Samiksha* **6** (2) 70-118, 1952.

1619. ROY, A. N., Folic acid antagonists in leukemia. *Calcutta med. Rev.* **19** (2) 38-39, 1952.

1620. ROY, N. B., Radioactive isotopes in medicine. *Sci. & Cult.* **18** (1) 4-7, 1952.

1621. SAIDMAN, JEAN & MEHTA, PRANJIVAN, M., Elements of light therapy. Publ. Popular Book Depot, Bombay 7. Pp 149. Rs. 7/8/0.

1622. SINGH, BALDEV & CHANDY, JACOB, Electro-encephalography in health and disease. *Indian med. Gaz.* **87** (7) 310-318, 1952.

1623. Electroencephalography. (editorial) *Indian med. Gaz.* **87** (7) 309-310, 1952.

616.001 INJURIES. WOUNDS

cf. also 1738

1624. DESAI, MANIBHAI D., Treatment of burns. *J. Indian med. Ass.* **21** (11) 475-478, 1952.

1625. JACOB, K. C., Two unusual cases of death from accidental injury. *Antisep.* **49** (10) 795-798, 1952.

1626. JACOB, K. C. & KRISHNA GOPAL, C. B., Perforation of the aorta by swallowed fish bone. *Indian med. Gaz.* **87** (11) 512-516, 1952.

1627. PATRICK, I. T., An unusual case of chest injury. *J. Christ. med. Ass. India etc.* **27** (6) 311-312, 1952.

616.002.5 TUBERCULOSIS

cf. also 1376 blood groups in T.B.; 1521, 1715, 1743, 1744, childhood T.B.; 1834, 1835, 1849, 1859, pulmonary T.B.; 1902, pleural T.B.; 1716, 1776, 1918, 1930, Meningitis T.B.; 1977, T.B. of hip; 2001, T.B. of pericarditis

1628. CHATTERJEE BAHADUR, G. C. On a case of tuberculosis of lung with extensive physical sign as made out by X-ray, healing rapidly mainly by sanatorium regime of rest, followed by graduated exercise. *Indian med. Rec.* **72** (7) 162, 1952.

1629. CHATTERJEE, G. C., Tuberculosis problem of the Indian Union. *Indian med. Rsc.* **72** (10) 225-229, 1952.

1630. GHOSH, P. K., Abdominal tuberculosis. *Calcutta med. J.* **49** (9) 362-366, 1952.

1631. GREWAL, K. S. Observations on some aspects of joint tuberculosis. *Antisep.* **49** (12) 913-917, 1952.

1632. KINI, M. G., Tuberculosis of the ankle joint. *J. Indian med. Ass.* **22** (2) 49-51, 1952.

1633. SHUKOR, M. A., Some problems of the tuberculosis patient. *Antisep.* **49** (8) 613-616, 1952.

1634. WILSON, JULIUS L., New development in the treatment and control of tuberculosis. *Calcutta med. Rec.* **19** (6) 137-140, 1952.

616.002.6 SYPHILIS

cf. also 1726, 1779

1635. DE SILVA, C. C. & JANSZ, C. C. A., Report of two cases of congenital syphilis. *J. child hosp. Colombo* **2** (1) 50-51, 1952.

1636. MUKHERJEE, DHIRENDRA NATH, Congenital syphilis and scurvy as causes of painful joints in childhood. *J. Indian med. Ass.* **21** (12) 510-513, 1952.

616.002.73 LEPROSY

cf. also 1369, 1474, 1545

1637. DE MELLO, FROILANO, On what lines should modern advances in leprology modify the organisation of an Anti-leprosy campaign. *Antisep.* **49** (7) 525-532, 1952.

1638. DHARMENDRA & CHATTERJEE, S. N., A case of leprosy wrongly diagnosed as neurifibroma (note) *Lepr. India* **24** (3) 160-163, 1952.

1639. DHARMENDRA & CHATTERJEE, K. R., Thiomicarbazone in the treatment of leprosy. *Lepr. India* **24** (3) 93-125, 1952.

1640. DHARMENDRA & MUKHERJEE, N., A simple method of concentration of leprosy bacilli from 'closed' cases of leprosy. *Lepr. India* **24** (4) 169-177, 1952.

1641. FURNISS, A. L., Leproma in female breast presenting as carcinoma. *Indian med. Gaz.* **87** (7) 304, 1952.

1642. MUKHERJEE, N., Classification of leprosy, *Lepr. India* **24** (4) 183-187, 1952.

1643. NAUG, E. B., Hansen's disease in the army. *Army med. corps. India* **8** (4) 181-198, 1952.

1644. ROGERS, LEONARD. The reduction of leprosy incidence by isolation of infective cases, combined with six monthly surveys of all contacts to detect new cases in an easily curable stage. *Indian med. Gaz.* **87** (11) 528-529, 1952.

1645. ROY, A. T., Criteria for discharge of a patient from a leprosy home (with special reference for reappointment by employer). *Indian med. Gaz.* **87** (11) 530-531, 1952.

1646. ROY, A. T., Diaminodiphenylsulphone in leprosy. *Patna J. Med.* **26** (3) 133-134, 1952.

1647. SARKAR, R. N., Leprosy and its modern treatment. *Indian J. Ven. Dis. & Derm.* **18** (4) 138-141, 1952.

1648. SEN, P., A review on classification of leprosy. *Lepr. India* **24** (4) 188-203, 1952.

1649. Classification of leprosy. (editorial) *Lepr. India* **24** (8) 87-92, 1952.

1653. CHAUDHURI, K. D., Eosinophilia in hookworm infection and its correlation with haemoglobin percentage. *Patna J. Med.* **26** (3) 125-127, 1952.

1654. GADGIL, R. K. & SHAH, S. N., Human schistosomiasis in India—Discovery of an endemic focus in the Bombay state. *Indian J. med. Sci.* **6** (11) 760-763, 1952.

1655. GHOSE, D. C., Guinea worm disease: case notes. *Indian med. Gaz.* **87** (11) 525-526, 1952.

1656. GUPTA, MAHARAJ, Ankylostomiasis. *Clinic. Soc. J. (Med. Coll. Lucknow)* **36** (3) 19-21, 1952.

1657. RAMAMOHAN RAO, V., Ascariasis. *Antisep.* **49** (10) 757-762, 1952.

1658. RAO, K. A., Hydatid cyst liver—Rupture into alimentary canal. *J. Indian med. Ass.* **21** (12) 520-521, 1952.

1659. TRIVEDI, B. P., CHOWDHURY, B. & BARUA, D., Hydatid disease of the lungs. *Indian J. med. Sci.* **6** (9) 591-594, 1952.

1660. TRIVEDI, B. P. & SARKAR, S. K., Pulmonary actinomycosis. *Indian J. med. Sci.* **6** (9) 595-600, 1952.

616.002 9 DISEASES CAUSED BY METAZOA.

MYCOSIS

cf. also 1510, 1752, 1853

1650. BHATTACHARYA, INDU BHUSAN, Multiple parasitic infection of the intestine with duodenal ulcer. *J. Indian med. Ass.* **21** (11) 481-483, 1952.

1651. CHATTERJEE, K. D., Human parasites and parasitic diseases. Publ. Sree Saraswati Press, Calcutta 9. Rs. 65/-, 1952.

1652. CHAUDHURI, K. D., Type of population affected with hookworm infection. *Patna J. Med.* **26** (4) 167-168, 1952.

1661. Seminar on "Ascariasis" held on March 20th, 1952, during the visit of the WHO team to Ceylon. *J. child hosp. Colombo* **2** (1) 68-70, 1952.

616.003 DEGENERATION

1662. SARMA, A. V. S., Hepato lenticular degeneration. *Antisep.* **49** (8) 621-622, 1952.

616.005 DISORDERS IN BLOOD SUPPLY

cf. also 1813, 1822, 1827

1663. BILIMORIA, F. J., A case of subarachnoid haemorrhage. (Lett.) *J. Indian med. Ass.* **21** (10) 456-457, 1952.

MEDICAL SCIENCES

1664. DAS GUPTA, NIRMAL. Haemorrhage, its pathogenesis and therapeutic approach. *Calcutta med. J.* **49** (7) 259-272, 1952.

1665. RAMAMURTHI, B. Subacute subdural haemotoma. *J. Indian med. Ass.* **21** (10) 439-440, 1952.

1666. SOM, ASITA LAL. Thrombo-angitis obliterans. *Indian J. Surg.* **14** (3) 249-260, 1952.

1667. SUBRAMANIAM, R. Coronary thrombosis. (Diagnosis and treatment) *Antisep.* **40** (11) 825-883, 1952.

616.06 TUMOURS CYSTS. CANCER. CARCINOMA

cf. also 1265, 1519, 1837, 1931

1668. BARUAH, B. D. & CHARI, M. V. Kartagener's syndrome with bronchogenic carcinoma. *J. Indian med. Ass.* **21** (10) 438-439, 1952.

1669. BHENDE, Y. M. Renal cell carcinoma showing glomerulus-like structures. *Indian med. Gaz.* **87** (9) 405-406, 1952.

1670. BHENDE, Y. M. Plain muscle tumours of the kidney showing angiomatic pattern produced by arterioles. *Indian J. med. Sci.* **6** (11) 747-754, 1952.

1671. BHENDE, Y. M. Malignant amelanotic melanoma of the skin in an albino. *Indian J. med. Sci.* **6** (11) 755-759, 1952.

1672. BOMAN, T. J. Separation and assay of amino-acids in mouse tumour and embryo by paper chromatography. *Indian med. J. Sci.* **6** (9) 623-627, 1952.

1673. CHANDY, JACOB. Tumours of the spinal cord. *J. Christ. med. Ass. Indi* **27** (5) 239-245, 1952.

1674. COORAY, G. H. PANABOKKE, R. G. & WIJESEKERA, S. V. J. Some observations on prostatic carcinoma in Ceylon. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 2-3, 1952.

1675. DAS, AMALANANDA. Multiple myeloma with a case report. *Calcutta med. J.* **49** (11) 423-426, 1952.

1676. DAS, K. Early diagnosis of carcinoma. *J. Indian med. Ass.* **22** (3) 105-106, 1952.

1677. DODEJA, K. (Miss) Adenocarcinoma carpi-uteri. *Clinic. Soc. J. (Med. Coll. Lucknow)* **36** (3) 69-73, 1952.

1678. GOVONI, ANTONIO. Bronchogenic carcinoma. *Indian med. Rec.* **72** (2) 177-185, 1952.

1679. GUHA, A. C. & MITRA, S. K. A case of reticulum cell sarcoma. *Indian med. Gaz.* **87** (11) 504-506, 1952.

1680. GUHA, A. C. & MITRA, S. K. Carcinoid of the appendix. *Indian med. Gaz.* **87** (12) 557-559, 1952.

1681. KAIKINI, V. M. Experience with the malignant tumours of the upper jaw. *Indian J. Surg.* **14** (3) 265-270, 1952.

1682. MAHADEVAN, R. A rare case of parotid salivary cyst due to Rhinosporidiosis. *Indian J. Surg.* **14** (3) 271-274, 1952.

1683. MALKANI, PARVATI K. Double dermoid cyst of the ovary. *J. Obst. & Gynaec.* **13** (7) 146-147, 1952.

1684. MANGALIK, V. S. & WAHAL, K. M. Lateral 'aberrant' thyroid tumours. *Indian J. Surg.* **14** (4) 295-303, 1952.

1685. MENON, A. N. K., Lympho-sarcoma of the stomach and small intestines. *Indian J. Rad.* **6** (3) 90-91, 1952.

1686. NANAVATI, A. N. D., Rhabdomyosarcoma—a clinico pathologic study of 18 cases. *Indian J. med. Sci.* **6** (11) 775-786, 1952.

1687. ROANTREE, W. B., Multilocular dentigerous cyst. *Indian med. Gaz.* **87** (12) 555-556, 1952.

1688. SIRSAT, M. V., Malignant melanoma of the vagina. *Indian J. med. Sci.* **6** (12) 882-883, 1952.

1689. SIRSAT, M. V., Malignant melanoma of the nasal mucosa. Report of a case. *Indian med. Gaz.* **87** (8) 357-358, 1952.

1690. SIRSAT, M. V., Malignant melanoma of the skin in Indians. *Indian J. med. Sci.* **6** (11) 806-813, 1952.

1691. SIRSAT, M. V., Grading of tumours. *Indian J. med. Sci.* **6** (8) 504-521, 1952.

1692. SIRSAT, M. V., Odontogenic tumours. *Indian J. med. Res.* **40** (4) 555-567, 1952.

1693. TILAK, C. T., A case report on haemangio-endotheloma sarcoma of liver. *Indian med. Gaz.* **87** (10) 459-460, 1952.

1694. YOGANATHAN, MANGAYARKARASI & DISSANAIKE, S., Enterobius vermicularis in a suppurating cyst of the female breast. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* **3**, 1952.

616.007 CONGENITAL AND DEVELOPMENTAL ABNORMALITIES
cf. 4/60 1959

1695. AIKAT, B. K. & SHARMA, K. D., Unusual type of vascular malformation as a case of fibro-congestive splenomegaly. *Indian J. med. Sci.* **6** (9) 603-608, 1952.

1696. AYER, A. A., Congenital absence of both upper limbs in human siblings. *J. anat. Soc. India* **1** (1) 28, 1952.

1697. CHANDY, JACOB, ISAAK, PONNU & BALASUBRAMANYAN, M., Paranasal dysplasia. *Indian J. Surg.* **14** (4) 337-345, 1952.

1698. DE SILVA, C. C., & SATHASIVAM, R. (Miss) Osteo-chondro dystrophy. *J. Child hosp. Colombo.* **1** 57, 1952.

1699. DE SILVA, STANLEY & JANSZ, C. C. A., Malformation of the right ventricle. *J. Child hosp. Colombo* **2** (1) 55-56, 1952.

1700. GESENIUS, HEINRICH, The increase of births of monsters in Berlin and its suburbs in the post war years. *Int. J. Sex.* **6** (1) 24-26, 1952.

1701. JOGLEKAR, S. R., A rare case of a rudimentary testis in the hernial sac of a "female" child. *Indian J. Surg.* **14** (4) 357-358, 1952.

1702. KHANNA, RAM CHAND, Solitary kidney or congenital absence of the kidney. *Indian J. Surg.* **14** (4) 329-334, 1952.

1703. LIPSCOMB, LAURA L. & MANOMANI, K., Hereditary ectodermal dysplasia with report of 3 cases of the anhydrotic variety. *J. Indian med. Ass.* **21** (11) 459-464, 1952.

1704. PANDYA, SAUDAMINI C., Male pseudohermaphroditism. *J. Obst. & Gynaec. India* **3** (1) 20-23, 1952.

1705. RATNAVATI, C. & REDDY, D. J., Congenital malformations. *Indian J. Surg.* **14** (3) 236-248, 1952.

1706. ROANTREE, W. B., Branchial fistula—report of a case. *Indian med. Gaz.* **87** (12) 563-565, 1952.

1707. SARMA, A. V. S., Gargoylism. *Antisep.* **49** (7) 540-542, 1952.

1708. SEN, S. & GHOSH, D. P., Acquired unilateral gigantism of left lower limb. *J. Indian med. Ass.* **22** (2) 74-75, 1952.

1709. Hereditary ectodermal dysplasia. (editorial) *J. Indian med. Ass.* **21** (11) 485, 1952.

616.008 DISORDERS IN FUNCTION AND METABOLISM

1710. BANERJEE, J. C., Renal anoxia and its management with two cases reports. *Calcutta med. J.* **49** (10) 383-388, 1952.

1711. DE SILVA, C. C. & SOYSA, P. (Mrs) Scurvy. *J. child hosp. Colombo* **2** (1) 34-35, 1952.

1712. SARMA, A. V. S., Vitamin deficiency diseases. *Antisep.* **49** (12) 925-932, 1952.

1713. The SEN, K. P., present concept of collagen diseases. *Calcutta med. J.* **49** (8) 311-314, 1952.

616.002 ORIGINS OF DISEASES. AETIOLOGY

1714. BANERJEE, J. C. & BHATTACHARYYA, P. B., A handbook of tropical diseases with treatment and prescriptions. (5th ed.) 1952. Publ. U. N. Dhur & Sons Ltd. 15, B. Chaterjee Street, Calcutta. Pp xiii + 536.

616.053.2 PEDIATRICS

cf. also 1635, 1636, 1699, 1799

1715. ACHAR, S. T., Childhood tuberculosis in Madras. *Indian med. Gaz.* **87** (9) 399-404, 1952.

1716. ABEYRATNE, LLOYD O., Tuberculous meningitis. *J. child hosp. Colombo* **2** (1) 63-65, 1952.

1717. ABEYRATNE, L. O. & WEERASINGHE, R. (Mrs) Acute lymphatic leukaemia. *J. child. hosp. Colombo* **2** (1) 49, 1952.

1718. ABEYRATNE, L. O. & WEERASINGHE, R. (Mrs) Pulsating empyema, *J. child. hosp. Colombo* **2** (1) 45, 1952.

1719. BERRY, J. N., Radiological signs in rickets and their differential diagnosis. *Indian J. med. Sci.* **6** (8) 522-526, 1952; *Indian J. Ped.* **11** (75) 110-114, 1952.

1720. CHAKRAVARTY, AMAL, Schilder's disease. *J. Indian med. Ass.* **22** (3) 119-120, 1952.

1721. CHARI, M. V., Marasmus-causes and management. *Indian med. Rec.* **72** (11) 249-251, 1952.

1722. DESHMUKH, H. K. & KUNDALKAR, O. G., Note on the haematological studies in children in Poona. *Indian med. Gaz.* **87** (10) 454-455, 1952.

1723. DE SILVA, C. C., Infantile diarrhoeas and their treatment. *J. child. hosp. Colombo* **2** (1) 3-12, 1952.

1724. de SILVA, C. C. SCHMIDT, E. & SOYSA, PRINYANI, Salmonellosis in children at the Lady Ridgeway hospital, Colombo. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* **7**, 1952.

1725. DE SILVA, STANLEY, Poliomyelitis in Ceylon. (report on 60 cases) *J. child hosp. Colombo* **2** (1) 38-43, 1952.

1726. DE SILVA, S., WICKREMASINGHE, W. & SILVA, J. A. C., Icterus gravis neonatorum in a baby born to a syphilitic mother. *J. child hosp. Colombo* **2** (1) 52-54, 1952.

1727. DHAR, D. R., Essentials on child health and some commoner diseases in children. *Indian med. Rec.* **72** (12) 273-275, 1952.

1728. DUTTA CHAUDHURI, R., Hematological study in Pediatric practice. *Indian J. Ped.* **11** (75) 97-109, 1952.

1729. FERNANDO, P. B., Rickets and osteomalacia of renal origin. *J. child hosp. Colombo* **2** (1) 13-19, 1952.

1730. GHOSH, B., Tropical liver abscess in a girl of six years. *Indian J. Ped.* **11** (75) 120-121, 1952.

1731. LAHIRI, K. D., Paludrine rash. *Indian J. Ped.* **11** (75) 118-119, 1952.

1732. MISRA, S. S., Infantile liver cirrhosis. *Clinic. Soc. J. (Med. Coll. Lucknow Univ.)* **36** (3) 29-35, 1952.

1733. PAL, DEVABRATA, A peculiar ocular manifestation of ariboflavinosis. *Indian J. Ped.* **11** (75) 115-117, 1952.

1734. PAUL, M., DE SILVA, C. C. & SATHASIVAM, R. (Miss) Typhoid perforation with recovery. *J. child hosp. Colombo* **2** (1) 66-67, 1952.

1735. PAUL, MILROY, Congenital hypertrophic pyloric stenosis. *J. child hosp. Colombo* **2** (1) 27-30, 1952.

1736. PERERA, A. F. S. & PAKTSUN, W. F. (Miss) Rare termination of infective hepatitis. *J. Indian hosp. Colombo* **2** (1) 21-22, 1952.

1737. PEROTTI, NICOLA, Report on the health of children (Society Proceedings) International Conference for the defence of children, Vienna. *Indian J. Ped.* **11** (75) 122-134, 1952.

1738. PRABHU, V. R., An interesting case of post-measles fever. *Antisep.* **49** (7) 557-559, 1952.

1739. RHODES, KATERINA, AUB, R. HILL, K. R. & STAFFORD, J. L., Serous hepatosis in Jamaican children. *Indian J. Ped.* **11** (76) 173-175, 1952.

1740. SARMA, A. V. S., Renal rickets. *Antisep.* **49** (12) 951, 1952.

1741. VENKATACHALAM, P. S., SRIKANTA, S. G. & GOPALAN, C., Nutritional oedema in children. *Indian J. Ped.* **11** (76) 165-172, 1952.

1742. VERE-HODGE, E. H., Birch's management and medical treatment of children in tropical countries. 9th ed. 1952. Publ. Thacker Spink & Co., Ltd. Calcutta. Pp 412. Rs. 16/-.

1743. WILSON, JOHN R., My impressions of childhood tuberculosis in Ceylon. *J. child hosp. Colombo* **2** (1) 31-33, 1952.

1744. Seminar on Tuberculosis in childhood. *J. child hosp. Colombo* **2** (1) 23-25, 1952.

1745. Seminar on "Infantile Diarrhoea" held on 24-3-52 during the visit of W. H. O. team. *J. Child hosp. Colombo* **2** (1) 71-73, 1952.

616.07 DIAGNOSIS, SIGNS AND SYMPTOMS

cf. also 1640, 1814, 1823, 1828, 1829, 1871

1746. ABDULLA, M. & ROHINI, D. K. (Miss) Vomiting, a sign of angina pectoris. *Indian med. Gaz.* **87** (12) 565-567, 1952.

1747. ABDULLA, M. & ROHINI, D. K., Psychogenic and emotional factors in bronchial asthma. *Indian J. med. Sci.* **6** (12) 899-900, 1952.

1748. BAPAT, M. V., A study in the diagnosis of uterine malignancy by vagina smear. *J. Univ. Poona* **1** (2) 1-6, 1952.

1749. BARTON, R. M., Estimation of blood sugar method of J. B. Bose. *Lab. techn. Bull.* **5** (2) 17-21, 1952.

1750. BARTON, R. M., Laryngeal swab and stomach wash cultures in Indian patients. *Lab. techn. Bull.* **5** (3 & 4) 34-37, 1952.

1751. BASU, U. P., Chloroiodized oil as contrast medium. *Indian J. Rad.* **6** (2) 59-60, 1952.

1752. BHARDWAJ, B. M., The V. D. R. L. (Cardiolipin) slide test. *Indian J. Ven.-Dis. & Derm.* **18** (4) 119-123, 1952.

1753. BHATTACHARJEE, J. N., A noteworthy case for diagnosis. *Indian med. Gaz.* **87** (8) 359-360, 1952.

1754. CHAKRAVARTY, R. K., Modified Leishman's stain without methyl alcohol. *Indian med. Gaz.* **87** (9) 404-405, 1952.

1755. CHATTERJEE, M. M., Some intractable case of Pruritus vulvae. *Antisep.* **49** (12) 952-957, 1952.

1756. DAVIS, R. B. & MOOKERJEE, K. C., Some clinical studies of the E. E. G. barbiturate reaction. *Indian J. neur. & Psych.* **3** (4) 335-344, 1952.

1757. DESHMUKH, P. L., General adaptation syndrome. *Antisep.* **49** (10) 745-749, 1952.

1758. GADEKAR, N. G., Radiological methods of diagnosing "Gall bladder disease". *Indian J. Rad.* **6** (4) 123-125, 1952.

1759. GHARPURE, P. V. & SWAMINATHAN, C. S., Cerebrospinal fluid findings in monkeys infected with known infective polio material. *Indian J. med. Sci.* **6** (9) 579-583, 1952.

1760. GHARPURE, P. V. & SWAMINATHAN, C. S., Duration of infectivity of monkey cord in laboratory polio infection. *Indian J. med. Sci.* **6** (9) 584-586, 1952.

1761. GHOSH, S. K. & DAS GUPTA, C. R., Leishman stain made with ethyl alcohol. *Indian med. Gaz.* **87** (7) 302-303, 1952.

1762. GUPTA, INDU MOHAN & MANGALIK, V. S., The use of male frogs, *Rana tigrina* in the diagnosis of pregnancy and allied conditions—a preliminary study. *Clinic. Soc. J. (Med. coll. Lucknow)* **36** (3) 22-28, 1952.

1763. GUPTA, P. N., Strongyloides stercoralis. *Indian med. Rec.* **72** (8) 185-189, 1952.

1764. KRISHNA RAO, S., Vesicular mole and its diagnosis by radiological method. *Indian J. Rad.* **6** (4) 129-132, 1952.

1765. MATHUR, T. N., Agranulocytosis following administration of acetylarsan injections. *J. Indian med. Ass.* **21** (12) 521-523, 1952.

1766. MUKHERJI, CHUNILAL, Bilirubin excretion test in toxæmias of pregnancy. *Indian J. med. Sci.* **6** (12) 869-881, 1952.

1767. NAG CHOWDHURY, S. K., Cardiospasm phrenospasm or oesophagectasia. *Indian med. Res.* **72** (10) 230, 1952.

1768. NASH, M. S., (Miss) Preparation of standard solutions. *Lab. techn. Bull.* **5** (2) 26-29, 1952.

1769. RAGHAVAN, P., Gastroscopy. *Indian Physn.* **11** (9) 187-194, 1952.

1770. RAJAPURKAR, M. V., The general adaptation syndrome. *Indian J. med. Sci.* **6** (8) 533-543, 1952.

1771. REIN, CHARLES R., Diagnostic aids in mass treatment campaign against jaws. *J. Indian med. Ass.* **22** (2) 67-71, 1952.

1772. ROW, R., On an acid fast *Mycobacterium* isolated in culture from a human leproma and its present position. *Indian J. med. Sci.* **6** (9) 621-622, 1952.

1773. ROY, A. T., Diaminodiphenyl sulphone in leprosy. *Lepr. India* **24** (3) 130-132, 1952.

1774. SAHA, HIRALAL & MUKHERJEE, CHUNILAL, Frog (*Rana tigerina*) test for diagnosis of pregnancy. *J. Indian med. Ass.* **21** (12) 335, 1952.

1775. SADHU, S.P., An observation in photography with X-ray films. *Indian med. Gaz.* **87** (12) 556-557, 1952.

1776. SARMA, A. V. S., Diagnosis in tuberculous meningitis in children. *Antisep.* **49** (10) 789-791, 1952.

1777. SHAH, H. H. & VASAVADA, N. B., Thymol turbidity as a liver function test. *Indian med. Gaz.* **87** (11) 492-494, 1952.

1778. SUBRAMANI IYER, C. G. & SWAMINATHAN, C. S., The isolation and study of poliomyelitis virus in Bombay. *Indian J. med. Sci.* **6** (11) 764-774, 1952.

1779. TUCKER, HAROLD & KIMBALL, ANNE C., Quantitative serologic tests for syphilis.—laboratory aspects and clinical applications. *Indian J. Ven. Dis & Derm.* **18** (8) 71-76, 1952.

1780. VENKATESAN, R. B., Bone marrow pictures *Lab. techn. Bull.* **5** (2) 22-25, 1952.

6.6.08 TREATMENT. MANAGEMENT

c.f. also 1560, 1710

1781. ABDULLA, M. & ROHINI, D. K. (Miss) Treatment of bronchitis. *Antisep.* **49** (10) 789-788, 1952.

1782. ATUKORALA A., Report of the use of Hetrzan and Santonin in Ascariasis. *J. child hosp. Colombo* **2** (1) 74-75, 1952.

1783. BHADURI, N. V. & CHOWDHURY, A. B., Diamino-diphenyl-sulphene (DDS) in the treatment of filariasis. *Indian med. Gaz.* **87** (11) 520-522, 1952.

1784. BHATTACHARJYA, B. & GUPTA, A. K., Management of a case of myocardial infarction. *J. Army med. corps (India)* **8** (3) 117-123, 1952.

1785. BOURGOYNE, J. ROY, Psychology and the dental patient. *Indian Dent. Rev.* **21** (12) 558-563, 1952.

1786. CHATTERJEE, S. K., Anaesthesia for thoracic surgery. *Indian med. Gaz.* **87** (8) 365-366, 1952.

1787. CHAUDHURI, K. D., Immediate effect of deworming in patients with peptic-ulcer-like syndrome. *J. Indian med. Ass.* **22** (1) 15-16, 1952.

1788. DEVADHAR, D. S. C., Personal experiences with liver injuries. *J. Christ med. Ass. India etc.*, **27** (5) 253-261, 1952.

1789. DODD, LLOYD H., Successful practice management. *Indian Dent. Rev.* **21** (12) 564-566, 1952.

1790. GHOSH, D. P. & GHOSH, P. (Mrs) The management of dehydration in surgical cases. *Antisep.* **49** (12) 905-912, 1952.

1791. GHOSH, P. K. & DAS, N. C., Absorption of PAS in health and disease. *J. Indian med. Ass.* **22** (3) 93-97, 1952.

1792. GUPTA, SHANTI PRAKASH, SINHA, B. N., CHOWDHURY, R. K., PANDE, R. C. CHARAN, ANANT., NAITHANI, Y. P. DARBARI, B. S. & AGARWAL BHARAT ENDU., Garlic juice in the treatment of ulcers. *J. Indian med. Ass.* **22** (1) 14-15, 1952.

1793. JOSHI, G. S., Physical therapy. *Indian Physn.* **11** (9) 195-201, 1952.

1794. KONAR, N. R., Feeding by the Ryle's tube. *J. Indian med. Ass.* **21** (11) 474-475, 1952.

1795. NAKRA, G. D. & SHARMA, Y. M. L., Cure of scorpion, bee or wasp sting. *Indian Forestr.* **78** (8) 428, 1952 : 78 (10) 535, 1952.

1796. PATEL, C. V. & SHAH, J. R., Observations on the use of ACTH and Cortisone. *Indian Physn.* **11** (12) 251-275, 1952.

1797. RANA, THAKORBAI D., Physical treatment of mental diseases. *Antisep.* **49** (11) 837-842, 1952.

1798. SAHA, KSHITISH CHANDRA, Some 'donts' in medical practice. *Indian med. Rec.* **72** (8) 189-194, 1952.

1799. SCHOLZ, RUDOLF, Prophylaxis and therapy in infants age. *J. Obst. & Gynaec.* **13** (10) 187-195, 1952.

1800. SIRCAR, 'Nee CHATERJEE) PURNIMA, A study on the circulating blood volume under anaesthesia. 4. Inhalation anaesthesia. *J. Indian med. Ass.* **22** (2) 45-49, 1952.

1801. SOM, ASITLAL, Management of post operative shock. *Calcutta med. Rev.* **19** (2) 33-37, 1952.

1802. UDUPA, K. N., Recent advances in the management of acute peritonitis. *Antisep.* **49** (11) 843-850, 1952.

1803. WEILENMANN, H., Nicotinamide and its therapeutic employment. *Chem. Age Ser.* **6** 101-102A, 1952.

616.091 MORBID ANATOMY

1804. REDDY, D. J., Necropsy findings in fulminant type of infective hepatitis. *Indian Physn.* **11** (8) 165-172, 1952.

616.093/098 BACTERIOLOGICAL AND PARASIT- OLOGICAL STUDIES

1805. ALWAR, V. S. & RAMAUJACHARI, G., Cultural experiments with *Trypanosoma Evansi* in chick embryo—a preliminary report. *Indian Vet. J.* **29** (2) 113, 1952.

1806. PARANDE, A. S., Parasite phagocytosis in peripheral blood in human malaria. *Indian med. Gaz.* **87** (7) 306, 1952.

1807. RAMAKRISHNAN, S. P., Studies on *Plasmodium berghei* N. sp. Vineke and Lips, 1948. VII. Spleen size in albino mice and rats with blood-induced infections. *Indian J. Malar.* **6** (2) 189-198, 1952.

1808. SINGH, JASWANT, KRISHNASWAMI, A. K., PRAKASH, SATYA, RAY, A. P. & RAMAKRISHNAN, S. P., Studies on *Plasmodium berghei* N. Sp. Vineke and Lips, 1948. VI. Reaction of blood-induced infection in albino mice to Daraprim. 2:4-diamino pyra midine. *Indian J. Malar.* **6** (2) 183-188, 1952.

1809. PRAKASH, SATYA, KRISHNASWAMI, A. K., & RAMAKRISHNAN, S. P., Studies on *Plasmodium berghei* N. Sp. Vineke and Lips, 1948. V. On the host range in blood induced infections. *Indian J. Malar.* **6** (2) 175-182, 1952.

1810. TRIBEDI B. P. BANERJEA, C. R. & SEN, S. K., *Salmonella paratyphi C* meningitis. *Indian J. med. Sci.* **6** (9) 587-590, 1952.

616.1/9 SPECIAL PATHOLOGY

1811. GOYAL, R. K. & GUPTA, D. P., Prevalence of diseases of pathological interest in Rajasthan. *Antisep.* **49** (8) 623-627, 1952.

1812. Abstracts of 100 meetings. (Pathology) Pt. II. *Indian J. med. Sci.* **6** (11) 814-865, 1952.

1822. MEHTA, P. M., Anemia and Ayurveda. *Indian J. med. Sci.* **6** (9) 628-664, 1952.

616.1 CARDIOVASCULAR DISEASES.

BLOOD DISORDERS

1813. BOSE, A. K., Coronary failure and anticoagulants. *Indian Heart J.* **4** (2) 99-100, 1952.

1823. PADMAVATI, S., New developments in the diagnosis and treatment of congenital heart disease. *J. Indian med. Ass.* **22** (3) 107-112, 1952.

1814. BOSE, A. K., Diagnosis of heart disease. *J. Indian med. Ass.* **22** (2) 59-63, 1952.

1824. PERERA, A. F. S. & PAKTUN, W. F. (Miss) Rheumatic carditis with mitral stenosis, mitral incompetence and functional tricuspid incompetence. *J. child. hosp. Colombo.* **2** (1) 44, 1952.

1815. BOSE, H. K. & CHATERJEE, S. C., Stokes-Adams syndrome in a case of Bradycardia. *Indian Heart J.* **4** (2) 101-104, 1952.

1825. RAMAN, T. K., The changing phase of Cardiology. (Presidential address) *Indian Heart J.* **4** (3) 117-128, 1952.

1816. DAS, AMALANANDA & CHATTERJEE, JYOTS-NARANJAN, Lutembacher's syndrome—report of two cases. *Indian Heart J.* **4** (3) 169-178, 1952.

1826. SATYANARAYANAMURTHI, G. V., A case of eosinophilic myocarditis with cardiac arrhythmia congestive failure. *Indian Heart J.* **4** (3) 162-168, 1952.

1817. DASS, K. K. & AGGARWAL, L. C., Observations on four cases of macrocytic tropical anaemias (haemolytic type). *J. Army med. corps India* **8** (4) 211-214, 1952.

1827. VAKIL, RUSTOM JAL, Statistical observations on cases of coronary thrombosis. (based on 715 cases). *Indian Physn.* **11** (11) 231-237, 1952.

1818. DUNLOP, K. J. & MOZUMDER, U. K., The occurrence of sickle cell anaemia among a group of tea garden labourers in Upper Assam. *Indian med. Gaz.* **87** (9) 387-391, 1952.

1828. VAKIL, RUSTOM JAL & GOLWALLA, A., Clinical diagnosis of abnormal cardiac rhythms or cardiac arrhythmias. *Indian Heart J.* **4** (2) 72-88, 1951.

1819. KHOSLA, H. L. & DAS GUPTA, A., Treatment of hypertension with hexamethonium bromide. *Indian J. med. Sci.* **6** (7) 413-423, 1952.

1829. SHAH, V. V., Electrocardiogram in anaemia. *Indian Heart J.* **4** (3) 129-136, 1952.

1820. KONAR, N. R., SEN GUPTA, A. N. & BASU, A. N., Chronic constrictive pericarditis treated by pericardectomy. *Indian Heart J.* **4** (3) 179-190, 1952.

1830. TRIBEDI, B. P. & CHANDA, N. K., Polyarteritis nodosa. *Indian med. Gaz.* **87** (10) 451-453, 1952.

1821. KUNDU, KUMAR SISIR, Leukaemia—some clinical types of onsets. *Antisep.* **49** (12) 958-962, 1952.

1831. MAHAJAN, K. R., Hypertension. *J. Indian med. Ass.* **22** (1) 16-21, 1952.

1832. Sickle cell anaemia in India (editorial). *Indian med. Gaz.* **87** (9) 409-410, 1952.

616.2 DISEASES OF THE RESPIRATORY
ORGANS EAR, NOSE & THROAT

cf. also 1678

1833. BAYER, HEINZ G. A. & TALWATTI, S. N. B., Report on myiasis of the ears and nose in Ceylon. *Proc. Ceylon Ass. Adv. Sci. (8th Anniv. Sess.)* **6**, 1952.

1834. CHAKRAVARTI, AMAL, Pulmonary tuberculosis in relation to eosinophil lung. *J. Indian med. Ass.* **21** (12) 507-509, 1952.

1835. DAVID, JOHN G., A preliminary report on three cases of pulmonary tuberculosis treated with "Tibizide". *Antisep.* **49** (11) 878-883, 1952.

1836. DE SILVA, STANLEY, TAMBY, R. (Miss) & DE SILVA, M (Miss), Monilial infection of the lung. *J. child hosp. Colombo* **2** (1) 48, 1952.

1837. GAULT, E. W., ASIRVADHAM, M., D'SENA, G. W. L., THOMAS, E. & VARUNNY, E., Pathology of bronchiectasis and cystic lung. *India J. med. Sci.* **6** (10) 673-682, 1952.

1838. KINI, K. R., Lung syndrome of eosinophilia. *J. Indian med. Ass.* **21** (10) 420-425, 1952.

1839. KACKER, R. N., Nasal factor in asthma. *Clinic Soc. J. (Med. Coll. Lucknow)* **36** (3) 40-41, 1952.

1840. MAZUMDAR, H., A typical onset of lobar pneumonia. *Calcutta med. J.* **49** (11) 431-434, 1952.

1841. MENON, A. N. K., Bilateral bronchiectasis with a broncholith in the right upper lobe bronchus (case note). *India J. Rad.* **6** (3) 93, 1952.

1842. NAGCHOWDHURY, S. K., Acute mastoiditis. *Indian med. Rec.* **72** (9) 201-202, 1952.

1843. NAGCHOWDHURY, S. K., Chronic mastoiditis. *Indian med. Rec.* **72** (7) 160-161, 1952.

1844. NARASIMHA RAO, P., Bronchial asthma and its relation to nose and throat affections. *Antisep.* **49** (8) 595-598, 1952.

1845. RANJAN, M. P., Halitosis. *Indian med. Rec.* **72** (9) 202-204, 1952.

1846. SINGH, GURBUXSH, Pleurisy with effusion. *Indian J. med. Sci.* **6** (8) 527-532, 1952.

1847. SINGHAL, GHANSHYAM, Two cases of lung abscess. *Clinic Soc. J. (Med. Coll. Lucknow)* **36** (3) 74-77, 1952.

1848. SOM, A., Modern treatment of Bronchiectasis. *Calcutta med. Rev.* **19** (3) 70-71, 1952.

1849. TANDON, R. N. & RASTOGI, O. N., Iso-nicotinic acid hydrazide in the treatment of pulmonary tuberculosis. *Clinic Soc. J. (Med. Coll. Lucknow)* **36** (3) 36-39, 1952.

1850. WAHI, P. N., Studies of the role of fungi in pulmonary disease. *Agra Univ. J. Res. (Sci.)* **1**, 205-224, 1952.

616.3 DISEASES OF THE DIGESTIVE SYSTEM

cf. also 1685, 1693, 1802, 1985

1851. BASU, S. P. & RAI CHOUDHURY, M. N., An unusual situation of gallbladder. *Indian med. Gaz.* **87** (9) 406-407, 1952.

1852. FLETCHER, A. G., The treatment of peptic ulcer. *J. Christ. med. Ass. India. (et. al.)* **27** (4) 183-193, 1952.

1853. GHOSH, K. K., Acute haemorrhagic pancreatitis due to round worm. *J. Indian med. Ass.* **21** (10) 437-438, 1952.

1854. GUPTA, DHRUBA MOHAN & GHOSH, SITAL CHANDRA, Chloroquine in the treatment of amoebic hepatitis and amoebic liver abscess. *Calcutta med. J.* **49** (12) 468-475, 1952.

1855. GUPTA, H. C., Polypus of the smallbowel leading to intussusception in an adult. *J. Indian med. Sci.* **21** (12) 523-524, 1952.

1856. HARRINGTON, S. W., Esophageal hiatus diaphragmatic hernia. *Calcutta med. Rev.* **19** (8) 181-188, 1952. **19** (10) 229-237, 1952.

1857. JHALA, H. I., Pathology of peptic ulcer. *Calcutta med. Rev.* **19** (2) 29-32, 1952.

1858. JHALA H. I., Pathology of common gall bladder diseases. *Indian J. Rad.* **6** (3) 71-75, 1952.

1859. MANGALIK, V. S. & MISRA, S. C., Primary intestinal tuberculosis. *Indian J. Rad.* **22** (1) 12-14, 1952.

1860. MUKERJI, S. K., Infantile cirrhosis of liver. *J. Indian med. Ass.* **22** (1) 6-12, 1952.

1861. PRADHAN, P. N., Infective hepatitis—with an account of epidemic incidence in Nagpur, Madhya Pradesh. *J. Indian med. Ass.* **21** (10) 427-430, 1952.

1862. VELIATH, G. D., SRINIVASACHAR, S. & SUNDARA SIVA RAU, D., Fatty cirrhosis of the liver. *Indian J. med. Sci.* **6** (12) 884-888, 1952.

1863. RAI, K. M., Radiological aspect of gall bladder diseases. *Indian J. Rad.* **6** (3) 76-82, 1952.

1864. SARMA, A. V. S., Coeliac disease. *Antisep.* **49** (9) 697-700, 1952.

1865. SARMA, A. V. S., Hepato-splenomegaly of undetermined etiology—lipoidosis. *Antisep.* **49** (9) 725-726, 1952.

1866. SRIVASTAVA, S. P., Crohn's disease of the ileocaecal region. *Agra Univ. J. Res. (Sci)* **1**, 225-232, 1952.

cf. also 1692

616.314 DENTISTRY

1867. BALENDRA, W., Dental caries and gum infections among school children in Ceylon. *J. child hosp. Colombo* **2** (1) 58-62, 1952.

1868. BELDING, PAUL H. & BELDING, LETA V., Diet, dental caries and salivary inhibition. *Indian Dent. Rev.* **21** (12) 531-535, 1952.

1869. BERY, N. N., Dental amenities in India. *Indian Dent. Rev.* **21** (12) 589-592, 1952.

1870. CHAWLA, T. N., Case report of an ectopic maxillary third molar. *J. All-India Dent. Ass.* **24** (10) 12, 1952.

1871. CIPES, L. RICHARD, Terramycin: Report in treatment of 20 cases of Vincent's infection. *Indian Dent. Rev.* **21** (12) 525-527, 1952.

1872. EMAN, VERNOR H., Treatment of the tooth socket without a blood clot. *Indian Dent. Rev.* **21** (12) 528-530, 1952.

1873. ENNIS, LEROY M. & BERRY, HARRISON M., The necessity for routine roentgenographic examination of the edentulous patient. *Indian Dent. Rev.* **21** (12) 550-554, 1952.

1874. FREEMAN, CHARLES W., Preventive dentistry—a challenge to the profession. *Indian Dent. Rev.* **21** (12) 555, 1952.

1875. GURLEY, JOHN E., Dentistry—an historical review. *Indian Dent. Rev.* **21** (12) 513-517, 1952.

1876. HILLENBRAND, HAROLD., Present status of Dentistry in U. S. America. *Indian Dent. Rev.* **21** (12) 593-600, 1952.

1877. LOPES, IVES, Jacket Crown. *J. All-India Dent. Ass.* **24** (10) 1-3, 1952.

MEDICAL SCIENCES

1878-1899

1878. MEHTA, FALI S., Modern trends in Periodontia. *Indian Dent. Rev.* **21** (12) 544-547, 1952.

1879. MINER, LEORY M. S., Penicillin and other mold derivatives in the treatment of dental infections. *Indian Dent. Rev.* **21** (12) 518-524, 1952.

1880. McCALL, JOHN OPPIE, Periodontia—past and present. *Indian Dent. Rev.* **21** (12) 536, 1952.

1881. MILLER, SAMUEL CHARLES, The diagnosis and treatment of periodontal disturbances for middle aged and elderly people. *Indian Dent. Rev.* **21** (12) 537-543, 1952.

1882. MORREY, LOX W., Preventive dentistry and school dental health programmes in the U. S. A. *Indian Dent. Rev.* **21** (12) 556-557, 1952.

1883. SEARS, VICTOR H., Teeth for artificial dentures. *Indian Dent. Rev.* **21** (12) 548-549, 1952.

1884. VENKATESWARLU, P., NARAYAN RAO, D. & RANGANATHA RAO, K., Studies in endemic fluorosis: Visakhapatnam and suburban areas. Fluorine, mottled enamel and dental caries. *Indian J. med. Res.* **40** (4) 535-548, 1952.

1885. WEINBERGER, BERNHARD WOLF, The importance of past. *Indian Dent. Rev.* **21** (12) 537-57, 1952.

1886. Chronology of Dentistry in India from 1920 onward. *Indian Dent. Rev.* **21** (12) 585-588, 1952.

1887. March of Dentistry during modern times (from 1728 A. D.). *Indian Dent. Rev.* **21** (12) 577-584, 1952.

616.4 LYMPHATIC SYSTEM. ENDOCRINOLOGY

f. also 1684

1888. BERNHARD, H., Endocrinology and sexual irregularities. *Int. J. Sex.* **6** (2) 73-76, 1952.

1889. GOVINDA REDDY, D. & ANGULI, V. C., Gaucher splenomegaly diagnosed by spleen puncture before operation. *Indian med. Gaz.* **87** (8) 358-359, 1952.

1890. JAIN, SHAKER CHAND, Role of splenectomy in cases of Banti's syndrome illustrated by two cases. *Clinic Soc. J. (Med. Coll. Lucknow)* **36** (3) 59-68, 1952.

1891. SARMA, A. V. S., Simmond's disease and progeria. *Antisep.* **49** (11) 870-874, 1952.

616.5 DERMATOLOGY. SKIN DISEASES

f. also 1690, 1731

1892. BANERJEE, N. M., A case of rodent ulcer developing on xeroderma pigmentosum in a boy aged 11 years. *Indian J. Rad.* **6** (3) 94-96, 1952.

1893. DAS, K. N., Prevalence of tropical ulcer (Naga sore) at Sagurnal tea estate, Sylhet. *Indian med. Gaz.* **87** (7) 292-295, 1952.

1894. DE SILVA, C. C. & SOYSA, P. (Mrs.), A case of scleroderma. *J. child hosp. Colombo.* **2** (1) 36-37, 1952.

1895. GHOSH, CHAITANYA KINKAR, Herpes zoster with eye complications. *Calcutta med. J.* **49** (9) 367-370, 1952.

1896. RAJAGOPAL, K. & CHOWDHURY, S. R., Phrynodermia and some associated changes in blood lipids. *Indian med. Gaz.* **87** (8) 350-353, 1952.

1897. RATHNAVELU, M., Treatment of chronic lichenified fungus. *Indian J. Ven. Dis. & Derm.* **18** (3) 87-88, 1952.

1898. SCHIFFERDECKER, IRMGARD., Morbus Pringle and tuberous sclerosis. *Indian J. Ven. Dis. & Derm.* **18** (4) 115-119, 1952.

1899. SUBBA RAO, K. V., Herpes zoster and varicella. *Antisep.* **49** (8) 587-594, 1952.

MEDICAL SCIENCES

1900-1920

1900. VENKATESAN, T. V., Treatment of sycoisis vulgaris and Bochart's folliculitis. *Indian med. Rec.* **72** (7) 160, 1952.

1910. BASU, S. P., Polyarthritis and hypertrophic pulmonary osteoarthropathy in a case of pulmonary neoplasm. *Indian med. Gaz.* **87** (8) 356-357, 1952.

616.6 GENITO-URINARY DISEASES & UROLOGY

cf. also 1403, 1670, tumor of kidney

1901. BANERJEE, SACHCHINANANDA, Treatment of diabetes. *J. Indian med. Ass.* **22** (2) 71-73, 1952.

1911. BASU, S. P., Osteitis pubis. *Indian med. Gaz.* **87** (12) 576-579, 1952.

1902. BASU, HIRANMOY, Pudendal block with purified extract of Chondodendron tomentosum in rigid perineum of primigravidae. *Indian med. Rec.* **72** (9) 204-206, 1952.

1912. GOOD, M. G., Tennis elbow—a traumatic myalgia of elbow. *Indian med. Rec.* **72** (7) 157-159, 1952.

1903. BELAVADY, BHAVANI, Role of glutathione in diabetes (discussion). *Proc. 39th Indian Sci. Congr. Pt. IV*, 115-116, 1952.

1913. GREVAL, S. D. S., Tendoachillis as a measure of somatic and psychosomatic wellbeing. *Indian med. Gaz.* **87** (11) 523-524, 1952.

1904. DEB, CHANDI CHARAN, Role of dehydroascorbic acid in diabetes. *Proc. 39th Indian Sci. Congr. Pt. IV*, 116, 1952.

1914. MENON, A. N. K., a) Primary osteochondritis of the vertebral bodies. (Case note). *Indian J. Rad.* **6** (3) 90, 1952.

1905. DWINEDI, J. K., Senile hypertrophy of the prostate. *J. Indian med. Ass.* **22** (2) 63-67, 1952.

1915. SARKAR, H. K., Supraspinatus calcification, report of 5 cases with a review of literature. *Calcutta med. J.* **49** (12) 463-467, 1952.

1906. GHOSE, D., ROY, D. L. & DUTTA CHAUDHURI, R., Bladder neck defects in women as seen in cystoscope. *J. Obst. & Gynaec. India* **3** (1) 13-19, 1952.

1916. SUBRAMANIAM, T. K., Bone in the penis. *J. Indian med. Ass.* **21** (10) 437, 1952.

1907. NATH, M. C., "Etiology of Diabetes",—a) Role of acetone bodies in the production of diabetes (discussion). *Proc. 39th Indian Sci. Congr. Pt. IV*, 113-114, 1952.

616.8 NEUROLOGY

cf. also 1673, tumor of spinal cord; 1797

1908. SAMUEL RAJ, J., Myiasis of the urinary passage in human male (Lett). *Cur. Sci.* **21** (8) 222-223, 1952.

1917. BHATTACHARYYA, G. & SEN, S., The epilepsies. *Antisep.* **49** (9) 683-692, 1952.

616.7 DISEASES OF THE LOCOMOTOR ORGANS.
BONES. JOINTS. MUSCLES

1909. AIKAT, B. K., PHATAK, LEELA V. & GUPTA, S., Pelvic tuberculosis—its incidence and methods of study. *J. Obst. & Gynaec. India* **3** (1) 6-12, 1952

1918. COELHO, G., Tuberculous meningitis. *J. Indian med. Ass.* **21** (10) 416-420, 1952.

1919. GHARPURE, P. V. & BHATT, P. R., Unusual manifestations in human polio. *Indian J. med. Sci.* **6** (9) 567-578, 1952.

1920. GRACIAS, R., Some observations on the spread of poliomyelitis. *Antisep.* **19** (11) 861-865, 1952.

AGRICULTURE

2739. KRISHNASWAMY, V. S., Bamboos—their silviculture and management. *Indian Pulp. & Pap.* 7 (1) 61-67, 1952.

2740. HAMILTON, A. P. F. & SINGH, PRATAP. Topsy turvy thinnings. (Lett.) *Indian Forestr.* 78 (9) 475-479, 1952.

2741. MALHOTRA, KHEM CHAND. Treatment of water-logged areas. *Indian Forestr.* 78 (10) 509-513, 1952.

2742. RAI, LAKHPAT. Management and improvement of forest grazing in the Madhya Pradesh. *Indian Forestr.* 78 (9) 431-439, 1952.

2743. SETH, S. K., The effect of water level on the rainfall of a locality. (Lett.) *Indian Forestr.* 78 (11) 586-587, 1952.

2744. SHAH, S. A., Economies of shifting cultivation in South Konkan. *Indian Forestr.* 78 (8) 417-422, 1952.

2745. SINGH, GAMBHIR. Afforestation and reclamation. *Bull. nat. Inst. Sci. India*, 1, 284, 1952.

2746. STEBBING, R. P., Forests, catchment areas and water supplies. *Indian For. Rec. (N. S.)* 7 (4) 253-421, 1951.

FOREST PRODUCTS

2747. CHAUDHURI, K. N., The utilization of inferior tree species and logging wastes in the moist sub-tropical forests of Eastern India. *Indian Forestr.* 78 (12) 609-626, 1952.

2748. LIMAYE, V. D., Timber for sports goods, Interim report on the strength of timber from Mulberry plantations. *Indian Forestr.* 78 (7) 371-375, 1952.

2749. LIMAYE, V. D., Strength of bamboo (*Dendrocalamus strictus*). *Indian Forestr.* 78 (11) 558-575, 1952.

2750. MACALPINE, R. I., Wood supplies in tea estates. Memorandum No. 24. Tocklai Experimental Station. Pp. 164, 1952.

2751. MEYER, K. S., The utilization of forest and other wood wastes. *Indian Forestr.* 78 (8) 411-413, 1952.

2752. PANDEY, J. N., Use of bamboo seed as food. (Lett.) *Indian Forestr.* 78 (9) 475, 1952.

2753. PUNTAMBEKAR, S. V., Chemical utilization of Indian forest products. *Souvenir Instn. Chem. (India)*, 97-103, 1952.

2754. SAKSRNA, K. B., Gum resin and forest research. *Indian Forestr.* 78 (11) 551-557, 1952.

2755. Notes on the utilization and silviculture of the timbers used in wood based industries of India. III. Paper industry etc. *Indian Forestr.* 78 (7) 348-370, 1952.

635 HORTICULTURE

2756. PERCY LANCASTER, S., Garden hints for planters. *Petr. J. & Agric.* XLIV (7) 167, 1952 : XLIV (8) 197, 1952 : XLIV (9) 229, 1952 : XLIV (10) 261, 1952 : XLIV (11) 291 : XLIV (12) 329, 1952.

GREEN VEGETABLES

2757. APPAJI RAO, B., A note on the use of cotton flower as a vegetable. (research note). *Madras agric. J.* 39 (12) 623, 1952.

2758. DIKSHIT, N. N. & SINGH, U. P., Vernalisation of cabbage seeds. (*Brassica oleracea* var *Capitata*). (Lett.) *Cur. Sci.* 21 (9) 249-250, 1952.

2759. MAHAATA, G. C., The cultivation of *Kundri* a perennial vegetable in Bihar. *Allahabad Farm.* 26 (6) 203-206, 1952.

2760. SINGH, BHOLA NATH & SHARMA, KAILASH NARAIN, Effect of sulphur and calcium on *Hibiscus esculentus*. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 33, 1952,

2761. SUBRAMANIAM, T. V., New kind of spinach, *Talinum triangulare*. (Lett.) *Madras agric. J.* 39 (9) 491, 1952.

2762. VENKATARAMANI, K. S., A preliminary study of some inter-varietal crossing and hybrid vigour in *Hibiscus esculentus* L. *J. Madras Univ.* 22B (2) 183-200, 1952.

2763. VERMA, R. D., Hints to the farmer: Rabi vegetables. *Indian Fmg.* 2 (6) 8-9, 1952.

OTHER GARDEN PRODUCE

2764. ARGIKAR, G. P., Segregation for cotyledon colour in *Cicer arietinum* L. *Poona agric. coll. mag.* 43 (2) 102-108, 1952.

2765. ARGIKAR, G. P., Some unreported mutations in *Cicer arietinum* L. *J. Indian bot. Soc.* 31 (4) 362-369, 1952.

2766. CHOUDHRI, R. S. & PRASAD, AMBIKA, Growth of tomato plants under continuous illumination. *J. sci. Res. Banaras Hindu Univ.* II, 205-209, 1951-52.

2767. SEKHON, GURBAKSH SINGH, G-24—A gram variety for the wilt affected areas. *Punjab Farm.* 4 (3) 262-265, 1952.

2768. SIKKA, S. M. & BAINS, G. S., Soyabean as a potential food—its mode of consumption and selection of edible varieties. *Punjab Farm.* 4 (1) 158-161, 1952.

2769. SINGH, BHOLA NATH & JALOTE, SHRI RAM, Crop nutrition experiments: Effect of nitrogen, phosphorus and boron on *Phaseolus radiatus*. *Proc. 39th Sci. Congr. Pt. IV* (abstr.) 32-33, 1952.

2770. SINGH, BHOLA NATH & SHARMA, KAILASH NARAIN, Effect of sulphur and calcium singly and combined on *Phaseolus radiatus*. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 33, 1952.

2771. SINGH, S. M. & KACKER, P. N., Effects of some hormones and their methods of application on parthenocarpy in tomato fruits. *Indian J. Hort.* 9 (4) 25-92, 1952.

635.9 FLOWER CULTURE

2772. SAMPATH, V., Rose growing on the Nilgiris. *Madras agric. J.* 39 (10) 505-512, 1952.

636 STOCKBREEDING

636.081/.083 BREEDING METHODS. REPRODUCTION. CARE

2773. ARUNACHALAM, T. V., LAZARUS, A. J. & ANANTAKRISHNAN, C. P., Observations of some Indian cattle. Pt. III. Factors influencing the gestation period and birth weight of Murrah buffaloes. *Indian J. Dairy Sci.* 5 (3) 117-124, 1952.

2774. ASKER, A. A., GHANDY, M. A. & RAGAB, M. T., Effects of exposing cattle and buffaloes to sun during summer in Egypt. *Indian J. Dairy Sci.* 5 (4) 171-182, 1952.

2775. GUZDAR, P. J., The brown Swiss cross with Indian cattle. *Allahabad Farm.* 26 (6) 191-202, 1952.

2776. KAURA, R. L., Indian breeds of livestock (including Pakistan breeds). Lucknow, 1952.

2777. MUKHERJEE, D. P. & BHATTACHARYA, P., Seasonal variations in semen quality and haemoglobin and cell volume contents of the blood in bulls. *Indian J. Vet. Sci. & Anim. Husbd.* 22 (Pt. II) 73-91, 1952.

2778. MULLICK, D. N. & KEHAR, N. D., Climate and animal health. I. Seasonal variations in the pulse rate, respiration rate, body temperature, body weight and haemoglobin in normal Indian cattle. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. I) 61-68, 1952.

2779. PRABHU, S. S. & GUHA, S., Effect of muscular exercise on semen production. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. II) 93-107, 1952.

2780. SHARMA, G. P., VALI, K. N. & SURI, K. R., Studies on the Haryana breed of cattle. *Res. Bull. East Punjab Univ.* No. 18, 57-68, 1951-52. Price Rs. 1/8/-.

2781. SHUKLA, D. D. & BHATTACHARYA, P., Seasonal variation in "Reaction time", and semen quality of sheep. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. II) 103-122, 1952.

2782. STONAKER, H. H., Plans for genetic increases in productivity of Indian cattle. *Allahabad Farm.* **26** (6) 183-190, 1952.

2783. The development of animal husbandry in the Island. (editorial). *Trop. Agric.* **CVIII** (4) 217-220, 1952.

636.084/.087 NUTRITION

2784. ANKER-LADEFØGED, A. V., Some aspects of the feeding and efficiency of dairy cows. *Trop. Agric.* **CVIII** (4) 238-241, 1952.

2785. BASU, K. P., Vegetable proteins—their chemical characteristics. *Proc. Soc. biol. Chem. (India)* **10**, 16-18, 1952.

2786. BASU, K. P., Vegetable proteins—their nutritive value. *Proc. Soc. biol. Chem. (India)* **10**, 19-21, 1952.

2787. LORD, J. S., What's new in the supplementing poultry feeds. *Indian Poul. Gaz.* **36** (2) 9-10, 1952.

2788. NORRIS, C. E., Stray cattle and pastures. *Loris* **6** (2) 42-43, 1952.

2789. PANDITTESEKERE, D. G., Paddy straw as a feed for cattle. *Trop. Agric.* **CVIII** (3) 166-185, 1952.

2790. RAY, S. C., Dietary proteins for livestock production. *Proc. Soc. biol. Chem. (India)* **10**, 33, 1952.

2791. SBN, K. C., Rubber seed kernel as cattle food. *Indian Rub. Bd. Bull.* **2** (3 & 4) 36-37, 1952.

636.089 DAMAGE TO ANIMALS. PESTS

2792. BASU, B. C., BALARAMA MENON, P. & SENGUPTA, C. M., Studies on the mange mites of livestock in India. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. II) 143-149, 1952.

636.2 CATTLE AND LARGE RUMINANTS

2793. D'SOUZA, BERITE A., Cattle show in Madras State. *Indian Fmg.* **2** (8) 10-11, 1952.

2794. MAHADEVAN, P., The general life and production statistics of the Sinhala cattle. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 13-14, 1952.

2795. MAHADEVAN, P., The performance of the Sinhala cattle. *Trop. Agric.* **CVIII** (4) 233-237, 1952.

636.39 SMALL RUMINANTS

2796. JOSHI, H. C., Jamnapari goats. *Indian Vet. J.* **29** (2) 101-103, 1952.

636.5 POULTRY

2797. IYER, S. G., Poultry breeding—selection of breeders. *Indian Fmg.* **2** (7) 14-15, 1952.

2798. LALL, H. K., Poultry development in Meerut circle. *Indian Fmg. (N. S.)* **2** (9) 26-28, 1952.

2799. RAO, S. B. V., Guinea fowls and turkeys in India. *Indian Poult. Gaz.* **36** (2) 4-5, 1952.

2800. ROY, SAMARENDRA N., Consumers education—2. 4. *Indian Poult. Gaz.* **36** (2) 6-8, 1952 : 36 (3) 27-28, 1952.

2801. HIRST, H., Furthering the supply and consumption of livestock produce in Ceylon. *Trop. Agric.* **CVIII** (4) 221-232, 1952.

637 PRODUCE FROM DOMESTIC ANIMALS

GENERAL

637.0 DAIRYING

2802. SEN, K. C. & ANANTAKRISHNAN, C. P., Progress in dairy chemistry in India. *Souvenir Instn. Chem. (India)* 78-83, 1952.

637.1 MILK

2803. ANANTAKRISHNAN, C. P., Milk and its products. *Indian Fmg. (N. S.)* **2** (9) 20-21, 1952.

2804. DASTUR, NOSHIR N., DHARMARAJAN, C. S. & VENKATESWARA RAO, R., Composition of milk of Indian animals. III. Freezing point, lactose and chloride content of milk samples from various parts in India. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. II) 123-133, 1952.

2805. DE. S. & RAY, S. C., Studies on the indigenous method of *Khoa* making. Pt. I. The influence of the conditions of dehydration and the type of milk on the production of *Khoa*. *Indian J. Dairy Sci.* **5** (3) 147-165, 1952.

2806. GULVADY, S. LILLY (Miss), KANNAN, A. & BASU, M. P., Cholesterol content of milk of cows and buffaloes. *Indian J. Dairy Sci.* **5** (3) 125-134, 1952.

2807. LAXMINARAYANA, H. & IYA, K. K., Studies on *Dahi*. I. Introduction and historical review. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. I) 1-12, 1952.

2808. LAXMINARAYANA, H., NAMBUDRIPAD, V. K. N., LAKSHMI, N. V., ANANTARAMIAH, S. N. & SREENIVASAMURTHY, V., Studies on *Dahi*. II. General survey of the quality of market *Dahi*. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. I) 13-25, 1952.

2809. MITRA, S. N., Determination of fat in "Chhana" by the Gerber milk butyrometer. (Lett.) *Sci. & Cult.* **18** (3) 150-151, 1952.

2810. NAMBUDRIPAD, V. K. N., LAXMINARAYANA, H. & IYA, K. K., Bactericidal efficiency of hydrogen peroxide. III. Use of hydrogen peroxide for preservation of milk. *Indian J. Dairy Sci.* **5** (3) 135-146, 1952.

637.2 BUTTER GHEE

2811. SUBRAHMANYAN, V., SREENIVASAN, M. & BHALE RAO, V. R., Adulteration of ghee and its detection. *J. sci. industr. Res.* **11A** (7) 277-282, 1952.

638.1 BEEKEEPING. APICULTURE

2812. MUTTOO, R. N., Tree apiaries. *Indian Bee J.* **14** (9-12) 87-89, 1952.

2813. MUTTOO, R. N., The processing and marketing of honey and its nutritional aspects. *Indian Bee J.* **14** (9-12) 99-103, 1952.

638.2 SERICULTURE

2814. ALI, HAKIM, New technique to eliminate infection. *Nosema bombycis*—among silk worms. *Indian Tex. J.* **63** (745) 46-47, 1952.

AGRICULTURE

2815. RAMACHANDRA RAO, A. & SUBRAMANIAM, V., Tassar culture in the Madras state. *Ind. Com. J.* 7 (3) 295-300, 1952.

639.1 HUNTING

2816. BURTON, R. W., A bibliography of big game hunting and shooting in India and the East. (contd.) *J. Bombay natr. hist. Soc.* 51 (1) 335-337, 1952.

2817. GEE, E. P., The management of India's wild life sanctuaries and National Parks. *J. Bombay natr. Soc.* 51 (1) 1-18, 1952.

2818. GOSWAMI, PRAMOD CH., Conservation and management of wild life in Assam. *J. biol. Soc. Assam* 1 (2) 32-37, 1952.

2819. MORRIS, R. C., Our vanishing wild life (Misc. note). *J. Bombay natr. hist. Soc.* 51 (1) 268-269, 1952.

2820. SRIVASTAVA, T. N., Wild life reserves in India : Uttar Pradesh (U. P.) *J. Bombay natr. hist. Soc.* 51 (1) 160-163, 1952.

639.2/3 FISHERIES

2821. BHIMACHAR, B. S. & VENKATARAMAN, G., A preliminary study of the fish populations along the Malabar coast. *Proc. nat. Inst. Sci. India* 18 (6) 627-655, 1952.

2822. CHACKO, P. I., Development of fisheries of the Kodaikanal lake, Mathurai Dt. *Ind. Com. J.* 7 (4) 372-374, 1952.

2823. DEPARTMENT OF FISHERIES, BOMBAY, Annual Report of the Department of Fisheries for the year 1951-52. Available Govt. Press. Bombay, 1953.

2824. DE ZYLLA, E. R. A., Fish farming in Malaya (as a guide to fish farming in Ceylon). Department of Fisheries, Colombo. Bulletin No. 4, Pp. 10. 10 plates. Publ : Ceylon Government Press, Colombo, 1952.

2825. GANAPATI, S. V. & CHACKO, P. I., Some observations on the spawning of Indian carps in the bundhs in Bengal. *Indian geogr. J.* 27 (3 & 4) 39-55, 1952.

2826. GEORGE, P. C., A systematic account of the Chaetognatha of the Indian coastal waters, with observations on their seasonal fluctuations along the Malabar coast. *Proc. nat. Inst. Sci. India* 18 (6) 657-659, 1952.

2827. JHINGRAN, V. G., Fisheries statistics. *Sci. & Cult.* 18 (3) 134-135, 1952. 18 (4) 166-169, 1952.

2828. JONES, S. & SUJANSINGANI, K. H., The *Mani-jal* of the Chilka lake—a special net for beloni-form fishes. (Misc. note). *J. Bombay natr. hist. Soc.* 51 (1) 288-289, 1952.

2829. JONES, S. & SUJANSINGANI, K. H., Notes on the crab fishery of the Chilka lake. *J. Bombay natr. hist. Soc.* 51 (1) 128-134, 1952.

2830. MACDONALD, A. ST. J., A fishing holiday in North Garhwal. *J. Bombay natr. hist. Soc.* 51 (1) 145-155, 1952.

2831. RAGHU PRASAD, R., Scientific survey of fishing banks. *Sci. & Cult.* 18 (5) 225-228, 1952.

2832. RANADE, M. R., Extension of range of the fish, *Rasbora labiosa* (Mukerji). (Misc. note). *J. Bombay natr. hist. Soc.* 51 (1) 281-282, 1952.

2833. SPURGEON, V. D., Piscicultural possibilities in Kurnool district. *Ind. Com. J.* 7 (4) 375-384, 1952.

2834. VELANKAR, N. K., Chemical properties of fish sauce from Thailand. (Lett.) *J. sci. industr. Res.* 11B (7) 310-311, 1952.

2835. VELANKAR, N. K., Moisture, salt, trimethylamine and volatile nitrogen contents and bacterial counts of salt-cured marine fish. *J. sci. industr. Res.* **11A** (8) 359-360, 1952.

2836. MENON, M. K., A note on the bionomics and fishery of the swimming crab, *Neptunus sanguinolentis*. (Herbst) on the Malabar coast. *J. zool. Soc. India* **4** (2) 177-184, 1952.

66 CHEMICAL INDUSTRY. CHEMICAL TECHNOLOGY

GENERAL

2837. AGARWALLA, B. P., Problems of nationalisation of basic industries. *Quart. J. geol. min. & metall. Soc. India* **24** (1-4) 25-30, 1952.

2838. BARAT, CHITTARANJAN, The chemistry of chemists *Souvenir Instn. Chem. (India)* 35-40, 1952.

2839. BHATNAGAR, S. S., Chemists in Society, State and Industry. *Souvenir Instn. Chem. (India)* 29-32, 1952.

2840. GHOSH, J. C., Past achievements and future trends. *Souvenir Instn. Chem. India* 194-197, 1952.

2841. GUHA, B. C., The status of chemists. *Souvenir Instn. Chem. (India)* 33-34, 1952.

2842. HAMIED, K. A. Role of chemist in administration. *Souvenir Instn. Chem. (India)* 40-43, 1952.

2843. KANE, G. P. & ROY, H. L., Chemical engineering progress in India. *Trans. Indian Instn. Chem. Engrs.* **IV**, 14-19, 1950-51.

2844. KASBEKAR, G. S., Utilisation of industrial wastes: Scope in ordnance chemical and filling factories. *Chem. Age. Ser. 6*, 37-43, 1952.

2845. ROY, H. L., Training of Chemists. *Souvenir Instn. Chem. (India)* 25-29, 1952.

2846. SEN, K. B., Science and salvage. *Souvenir Instn. Chem. (India)* 191-194, 1952.

2847. SEN, S. P., Chemical Industry. *Souvenir Instn. Chem. (India)* 54-60, 1952.

2848. Who's who in the Indian Chemical Industry. *Suppl. Chem. Age. Ser. 6*, 1-12, 1952.

66.02 WORKING METHODS AND APPARATUS

2849. EDULJEE, H. E. & RAMAN, B. V., The design of mechanical draft counter-flow water-cooling towers II. *Trans. Indian Instn. chem. Engrs.* **IV**, 20-31, 1950-51.

2850. EDULJEE, H. E. & RAMAN, B. V., The design of mechanical draft counter-flow water-cooling towers III ("Total heat" method). *Trans. Indian Instn. chem. Engrs.* **IV**, 32-52, 1950-51.

2851. EDULJEE, H. E. & RAMAN, B. V., The design of mechanical draft counter-flow water-cooling towers IV (The H. E. T. P. of packings). *Trans. Indian Instn. chem. Engrs.* **IV**, 53-54, 1952.

2852. PAREKH, H. V., The solvent extraction industry in India. *Chem. Age. Ser 6* : 139-147, 1952.

2853. RAMAN, B. V., The design of mechanical draft counter-flow water-cooling Towers-V. *Trans. Indian Instn. Chem. Engrs.* **IV**, 55-66, 1950-51.

66.04 HEAT TREATMENT

2854. BANERJEE, S. K. & ROY, H. L., Flow patterns and velocities of hot gas and spray particles in spray evaporators. *Trans. Indian Inst. chem. Engrs.* **IV**, 97-115, 1950-51.

66.09 CHEMICAL PROCESSES

2855. GAERTNER, WEIN, New developments in the Fischer-Tropsch synthesis. *Proc. 39th Indian Sci. Congr Pt. IV*, (abstr) 56-68, 1952.

661 CHEMICAL PRODUCTS

661.1 SPECIAL CHEMICAL INDUSTRIES

2856. PURI, BALWANT RAI, LAKHANPAL, M. L. & VERMA, BALVIR, Preparation of active carbon from a few indigenous sources and comparative efficiency of different activation treatments. *Res. Bull. East. Punjab Univ.* No. 19, Pp. 12, 1951-52.

2857. RAMPRASAD, B. K., Development of Electro-chemical industries in India. *Chem. Age Ser.* 6, 31-36, 1952.

661.2 SULPHUR. SULPHUR COMPOUNDS

2858. GUPTA, A. K., Development of our sulphuric acid industry on the lines adopted in Germany. *Chem. Age Ser.* 6, 163-172, 1952.

2859. VASUDEVA MURTHY, A. R., Studies in the chemical behaviour of some compounds of sulphur. Pt. I. Production of disulphur monoxide by the combination of sulphur in oxygen at low pressure. *Proc. Indian Acad. Sci. (A)* **36** (5) 388-501, 1952.

2860. Synopsis of symposium on Sulphur. *Trans. Indian Inst. Chem. Engrs.* **IV**, 124-127, 1950-51.

661.3 POTASSIUM AND SODIUM COMPOUNDS

2861. DAROGA, R. P., Wealth from distiller waste of an ammonia-soda process. *Chem. Age Ser.* 6, 87-88, 1952.

2862. DESAI, LILY B (Miss) & MEHTA, S. M., Preparation of ammonium sulphate and sodium bicarbonate from sodium sulphate. *J. sci. industr. Res.* **11** (B) 431-434, 1052.

661.4 HALOGENS

2863. JOSHI, C. B., Extent and utilisation of waste from marine salt works. *Chem. Age Ser.* 6, 29-30, 1952.

2864. GODBOLE, N. N., Salt manufactures at Didwana. *Chem. Age Ser.* 6, 17-21, 1952.

2865. GODBOLE, N. N., Sodium sulphate at Didwana. *Chem. Age Ser.* 6, 22-28, 1952.

661.7 ORGANIC MATERIALS

2866. SOURIRAJAN, S. & BHATTACHARYYA, S. K., Synthesis of acetic acid from methanol and carbon monoxide in the vapour phase in presence of iron catalysts at high pressures. (Lett). *J. sci. industr. Res.* **11B** (7) 309-310, 1952.

2867. SUBBA RAO, B. C. & BHATTACHARYYA, S. K., Utilisation of sewage digester gas. Pt. I. Production of formaldehyde from sewage digester gas. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 118-126, 1952.

661.8 INORGANIC COMPOUNDS IN GENERAL

2868. DESAI, VASANTRAI, Bichromate industry in India. *Chem. Age Ser.* 6, 115-118, 1952. Souvenir Inst. Chem. (India) 61-64, 1953.

662 PYROTECHNICS COMBUSTIBLES. FUELS

2869. ARAVAMUTHAN, V., Fuel cells. (Lett). *Irrig. & Power J.* **9** (2) 327-329, 1952.

2870. BANERJEE, SUBHAMOY, Combustion and reactivity of carbon in coal and coke. *Trans. Indian Inst. Chem. Engrs.* **IV**, 67-71, 1950-51.

2871. BHATNAGAR, S. S., Petroleum in India. *FRI news* **2** (4) 6-11, 1952.

2872. C. S. I. R. REPORT, Survey of the Bermo seam at Kargali and Dhori. (Joint publication by Damodar Valley Corporation and Fuel Research Institute.)

2873. C. S. I. R. Publication. A preliminary survey of Madhya Pradesh Coals. Fuel Research Institute, 1952.

2874. DAS GUPTA, A. K. & LAHIRI, A., Gasification of coal; Pt I. *J. sci. industr. Res.* **11A** (7) 301-307, 1952.

2875. DAS GUPTA, A. K., SHRIKHANDE, K. Y. & LAHIRI, A., Fluidized coal beds. *J. sci. industr. Res.* **11B** (12) 528-533, 1952.

2876. GHOSE, S. S. K., Furnace black and its manufacture in India. *Chem. Age Ser* 6, 97-99, 1952.

2877. GURUSWAMY S. & ROY, L. C., Resistance to breakage of the different specific gravity fractions of coal. *Trans. Indian Inst. Chem. Engrs.* IV. 72-83, 1950-51.

2878. GUBUSWAMY, S., The random breakage of coal and its assessment. *J. sci. industr. Res.* **11B** (11) 482-485, 1952.

2879. IYENGAR, M. S., VAIDYESWARAN, R. & DATAR, D. S., Studies on carbon deposit formation in flames: Pt. I.—Suppression of carbon deposit formation in flames of some organic compounds by carbon dioxide and nitrogen. *J. sci. industr. Res.* **11B** (11) 455-457, 1952.

2880. LAHIRI, A., A gas grid for the Damodar Valley. *FRI News.* **2** (3) 1-8, 1952.

2881. LAHIRI, K. C. & BASU, T. N., Refractive indices of Vitrain as an index of rank of coal. *J. sci. industr. Res.* **11B** (11) 486-490, 1952.

2882. MANDAL, A. K., Industrial development of solvent extraction of coal. *Trans. Indian Inst. Chem. Engrs.* IV, 84-90, 1950-51.

2883. MEHTA, M. M., KINI, K. A., MOITRA, A. K. & LAHIRI, A., Absorption of oxygen by Indian coals. *J. sci. industr. res.* **11B** (10) 418-422, 1952.

2884. NARAYAN RAO, B. S. & IYENGAR, M. S., Alcohol-petrol blends as fuels in I. C. engine. *J. sci. industr. Res.* **11A** (11) 497-501, 1952.

2885. RAJAN, T. P. S., Coal gas production and byproducts. *Chem. Age Ser* 6 : 151-161, 1952.

2886. SIMON-CARVET LTD., The design and operation of coke ovens. *Chem. Age Ser* 6, 45-55, 1952.

2887. TENDOLKAR, G. S. & THAKOOR, N. R. Ultimate analyses of coconut shell and shell charcoal (Lett). *J. sci. industr. Res.* **11B** (11) 501-502, 1952.

2888. TENDOLKAR, G. S. & THAKOOR, N. R., Ash from coconut shell. (Lett). *J. sci. industr. Res.* **11B** (11) 501, 1952.

2889. VENKATARAMAN, R. S., KHAN, H. A., DATAR, D. S. & ZAHEER, S. H., Activated charcoal from groundnut hull. *Chem. Age Ser* 6, 119-120, 1952.

2890. Coal marketing. *FRI news.* **2** (4), 1-5, 1952.

663 TECHNICAL MICROBIOLOGY. BEVERAGES
cf. also 869

2891. BHARGAVA, K. K., Recent advances in the fermentation industries. *Indian Sug.* **2** (9) 345-347, 1952.

2892. GUHA, B. C., MITRA, K. K., RANGASWAMI, S., SARMA, P. S. & PATEL, R. P., Symposium on Fermentation Technology. *Proc. 39th Indian Sci. Congr. Pt. IV*, 116-118, 1952.

2893. LEWIS, Y. S., & JOHAR, D. S., Spore size and appearance of *Aspergillus niger* in relation to citric acid. *Bull. cent. Food Techn. Res. Inst. Mysore* **2** (1) 16-17, 1952.

2091. PFESTORF, G. K. M. & BADKAS, D. J., New high voltage laboratory in India. *Powr. Engr.* 2 (4) 179-184, 1952.

621.3.05 TRANSMISSION

2092. BHOUMICK, N. P., Transmission line operation and maintenance in India. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (13) 5-8, 1952.

621.311 POWER GENERATION AND SUPPLY

cf. also 22; 3

2093. ARAVAMUTHAN, V., Utilisation of large blocks of hydroelectric power in India for the production of silicon and acetylene. (Lett.) *Irrig. & Powr. J.* 5 (2) 325-327, 1952.

2094. ARAVAMUTHAN, V., Hydroelectric power for cheaper chemical fertilizers. (Lett.) *Irrig. & Powr. J.* 5 (2) 321-322, 1952.

2095. BHATTACHARYA, P. K., Bokaro power station—Some salient features of design and installation. *Indian J. Powr. & Riv. Vall. Devlpt.* (DVC number) 29-38, 1952.

2096. CENTRAL WATER AND POWER COMMISSION
(Power Wing) Simla, Annual Report for the year 1951-
52, 1952. Pp. 188.

2097. CENTRAL WATER & POWER COMMISSION, (POWER WING) SIMLA, Planning for Power development in India—A handbook of information (2nd edition) Available: Manager of Publications, Civil Lines, Delhi, 8. Rs. 6/-.

2098. DORAI RAJAN, R., The Papanasam hydro-thermal development. *Indian & East. Engr.* **CXI** (3) 427-432, 1952.

2099. GOSWAMI, J. N. & SUBRAMANIAM, K., DVC power system. *Indian J. Powr. & Riv. Vall. Devlpt.* (DVC number) 45-51, 1952.

2100. JAIN, K. L., The Ganga canal hydro-electric grid and tube well irrigation in Uttar Pradesh, *J. Instn. Engrs. (India)* 33 (2) 163-192, 1952.

2101. KRISHNASWAMI, S., Power development practice in Europe and possible application in our country. *Power Engr.* 2 (4) 205-213, 1952.

2102. MUCKERJI, G. C., Coordination of power and communication system. *Irrig. & Power J.* 5 (1) 54-56, 1952.

2103. MUELLER, PAUL W., Basic factors in the design of solar energy power stations. *J. Instn. Engrs. (India)* **33** (2) 219-249, 1952.

2104. NANJUNDIAH, B., Electrical power development in India. *Indian & East. Engr.* **CXI** (3) 411-418, 1952.

2105. NEW, WILLIAM R. & SEN, SUDHIR, TVA and DVC. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (13) 9-16, 1952.

2106. RAGHAVAN, V. R., Use of high voltage alternating current for railway electrification. *Power. Engr.* 2 (3) 133-139, 1952.

2107. RAMASWAMY, K. N., Harnessing water for power generation. *Indian & East. Engr.* **CXI** (4) 563-580, 1952.

2108. RAM MOHAN, S., Fuel and heat economy in thermal power stations in India. *J. Instn. Engrs. (India)* **33** (1) 61-69, 1952.

2109. SEN, SUDHR, Why a steam power station.—Some facts about Bokaro Project. *Indian J. Power. & Riv. Vall. Devlpt.* (DVC number) 11-18, 1952.

2110. SETH, V. D., Sarda Hydroelectric project. *Power Enggr.* 2 (3) 116-121, 1952.

2111. VENKATESAN, N. Reactive power. *Power Engng.* 2 (3) 121-126, 1952.

2112. VERMA, P. L., Kalyan (chola) Power house of tomorrow. *Powr. Engr.* **2** (3) 127-133, 1952.

2113. WEISSEL, WALTER, Underground power stations. *J. Instn. Engrs. (India)* **33** (2) 195-208, 1952.

2114. Nizamsagar Hydro-electric scheme. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (12) 7-10, 1952.

621.315 LINES TRANSMISSION AND DISTRIBUTION LINES

2115. DATTA, M., Power line design. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (8) 17-21, 1952.

2116. DATTA, M., BHAUMIK, A. K. & AIYA, S. V. C., Symposium on Service Problem on overhead transmission in West Bengal. *Proc. 39th Indian Sci. Congr.* Pt. IV, 155-160, 1952.

2117. GADKARY, S. A. & TALWAR, R. C., Sag template. *J. Instn. Engrs. (India)* **33** (1) 70-85, 1952.

2118. GADKARY, S. A. & TALWAR, R. C., Operational characteristics in transmission lines. *Powr. Engr.* **2** (4) 184-193, 1952.

2119. GATES-REED, G. H., Quality insulating compounds for the electrical industry. *Chem. Age Ser.* **6**, 91-95, 1952.

2120. SHARAN, S., The problem of electrical insulation. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (10) 1-10, 1952.

621.316 DISTRIBUTION, REGULATION, PROTECTION

2121. BANERJEE, B. K., Double wire compensator and the working of outer and Warner signals by existing single-wire lever machine through doublewire transmission. *Quart. techn. Bull.* **9** (107) 271-272, 1952.

2122. COVENTRY, A. F., The case for the power capacitor. *Powr. Engr.* **2** (4) 200-204, 1952

2123. LALL, W. G. & CHOPRA, A. K., Economic span for 220 KV Nangal-Delhi line. *Powr. Engr.* **2** (4) 198-200, 1952.

621.317 MEASUREMENTS, INDICATORS, TARIFF

2124. CENTRAL WATER AND POWER COMMISSION. (Power Wing) Simla. Public electricity supply, All-India statistics, 1950—general review, 1951. Pp 29.

2125. CENTRAL WATER AND POWER COMMISSION, (Power Wing), Simla. Public electricity supply, all India statistics 1950—Particulars of individual undertakings, 1951. Pp 167.

2126. SUSZKIN, A., On a method of measuring very small time intervals. *J. Madras Inst. Techn.* **1** (1) 137-141, 1952.

621.318 APPLIED MAGNETISM

2127. LOMAS, J., Steels for field magnets and other electrical uses. *Indian & East. Engr.* **CXI** (5) 747-750, 1952.

621.319 APPLIED ELECTROSTATICS

2128. NARAYANAN, N. & PRABHU, K. S., Production of standard waves with a 3000 KV impulse generator. *J. Indian Inst. Sci.* **34B** (4) 113-122, 1952.

621.33 ELECTRIC TRACTION

2129. VANCHINATHAN, R., Chittaranjan Locomotive Works—Electricity services. *Powr. Engr.* **2** (4) 214-221, 1952.

621.35 APPLIED ELECTROCHEMISTRY

cf. also 431
2130. MATHUR, J. & RAMACHAR, T. L., Electrodeposition of cadmium zinc alloys from the sulphamate bath. (Lett.) *Cur. Sci.* **21** (11) 309-310, 1952.

2131. MATHUR, J. & RAMA CHAR, T. L., Electrodeposition of Cadmium from sulphamate bath. (Lett.) *J. sci. industr. Res.* **11B** (12) 546-547, 1952.

2132. VAID, J. & RAMACHAR, T. L., Electrodeposition of tin from the pyrophosphate-bath. (Lett.) *Cur. Sci.* **21** (11) 310-311, 1952.

2133. VAIL, J. & RAMACHAR, T. L., Electrodeposition of zinc from the pyrophosphate bath. (Lett.) *J. sci. industr. Res.* **11B** (11) 503-504, 1952.

2134. WATERFALL, T., Progress in electroplating. *Indian & East. Engr.* **CXI** (3) 423-426, 1952.

621.36 ELECTRIC HEATING

2135. COX, F. W., New practice in induction generation. *Indian & East. Engr.* **CXI** (1) 87-93, 1952.

2136. CLOGHER, A. C. & CRIPPEN, R. P., Co-ordinated utilization of thermal and hydro energy resources. *Indian J. Engng. & Techn.* **4** (9) 214-219, 1952.

2137. CHATTERJEE, G. P., Thermo-electric properties of metals and alloys as functions of mechanical and thermal treatment. *J. Instn. Engrs. (India)* **33** (2) 209-218, 1952.

621.38 ELECTRONICS. PHOTOCELLS

2138. JUPE, JOHN J., Electronic developments. *Indian & East. Engr.* **CXI** (1) 69-70, (2) 239-241, (3) 399-400, (4) 581-582, (5) 745-746, (6) 905-906, 1952.

621.39 TELECOMMUNICATION

2139. LUTHRA, P. N., The technical growth and development of signals. *Def. Sci. J.* **2** (2 & 3) 118-125, 1952.

2140. PASSMORE, E. C., Some aspects of signals in the I. A. F. *Def. Sci. J.* **2** (2 & 3) 113-117, 1952.

621.394 TELEGRAPHY

2141. AGARWAL, S. M., A universal auto manual relay set. *Telecom.* **2** (2) 98-103, 1952.

2142. KAUL, P. M., Planning and installations of C. B. multiple exchanges. *Telecom.* **2** (2) 119-131, 1952.

2143. PARTHASARATHY, C. D., Treatment of entrance cable for multichannel carrier systems in India. *Telecom.* **2** (2) 111-118, 1952.

2144. RANGANATHAN, K. V. & MAHADEVAN, T. K., Repair operation of the Indo-Ceylon co-axial submarine cable. *Telecom.* **2** (2) 104-110, 1952.

2145. SHRIVASTAVA, H. N., Design of transposition schemes for openwire circuits at carrier frequencies. *Telecom.* **2** (2) 81-85, 1952.

621.396 RADIOPHYSICS

2146. BANERJEE, B. K., Propagation of radio waves through ionosphere. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 18-21, 1952.

2147. BANERJEE, R. M., An improved "Pulse" technique for exploring the ionosphere. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 18, 1952.

2148. BANERJEE, B. M. & ROY, R., A high precision ionospheric sounding equipment. *Indian J. Phys.* **26** (10) 473-494, 1952.

2149. BANERJEE, S. S., Irregularities in the ionosphere. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 16-17, 1952.

2150. BARAL, S. S., Studies on sporadic E. *J. Sci. industr. Res.* **11A** (7) 290-296, 1952.

2151. BARAL, S. S., Ionospheric prediction. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 21-22, 1952.

2152. BARAL, S. S., MITRA, R. K., BANERJI, R. B., SAHA, A. K., GHOSH, M. (Miss), CHATTERJI, B. & KUNDU, M. R., Characteristics of the ionosphere over Calcutta (April, 1952). *J. sci. industr. Res.* **11A** (7) 288-289, 1952.

2153. BARAL, S. S., MITRA, R. K., BANERJI, R. B., SAHA, A. K., GHOSH, M. (Miss), CHATTERJEE, B. & KUNDU, M., Characteristics of the Ionosphere over Calcutta (May 1952). *J. sci. industr. Res.* **11A** (8) 336-337, 1952.

2154. BARAL, S. S., MITRA, R. K., BANERJI, R. B., SAHA, A. K., GHOSH, M. (Miss), CHATTERJEE, B. & KUNDU, M., Characteristics of the Ionosphere over Calcutta (June 1952). *J. sci. industr. Res.* **11A** (9) 388-389, 1952.

2155. BARAL, S. S., MITRA, R. K., BANERJI, R. B., SAHA, A. K., GHOSH, M. (Miss), CHATTERJEE, B. & KUNDU, M. R., Characteristics of the Ionosphere over Calcutta (July 1952). *J. sci. industr. Res.* **11A** (10) 440-441, 1952.

2156. BARAL, S. S., MITRA, R. K., BANERJI, R. B., SAHA, A. K., GHOSH, M. (Miss), CHATTERJEE, B. & KUNDU, M. R., Characteristics of the Ionosphere over Calcutta (August 1952). *J. sci. industr. Res.* **11A** (11) 488-489, 1952.

2157. BARAL, S. S., MITRA, R. K., BANERJI, R. B., SAHA, A. K., GHOSH, M. (Miss), CHATTERJEE, B. & KUNDU, M. R., Characteristics of the Ionosphere over Calcutta (September 1952). *J. sci. industr. Res.* **11A** (12) 532-533, 1952.

2158. BARAL, S. S., SAHA, A. K., Observations at Calcutta of pulses transmitted from Delhi. *Indian J. Phys.* **26** (11) 521-538, 1952.

2159. CHATTERJEE, B., Studies on ionospheric absorption. *Indian J. Phys.* **26** (12) 585-596, 1952.

2160. CHATTERJEE, S. K., Microwave cavity resonators as circuit elements. *J. Indian Inst. Sci.* **34B** (4) 99-112, 1952.

2161. CHATTERJEE, S. K., Some perturbation effects in microwave cavities operating in degenerate modes. *J. Indian Inst. Sci.* **34B** (3) 77-87, 1952.

2162. KHASTGIR, S. R., Fading in relation to ionosphere. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 15-16, 1952.

2163. KHASTGIR, S. R. & SETTY, P. S. V., Radio-frequency oscillations in A. C. silent discharges. (*Lett.*) *Cur. Sci.* **21** (7) 197-198, 1952.

2164. MITRA, A. P., Study of the ionosphere by extraterrestrial radio waves. *Indian J. Phys.* **26** (10) 495-511, 1952.

2165. MITRA, S. N., Effect of ionospheric irregularities on the variation of phase-path and amplitude of a downcoming wireless wave. *J. sci. industr. Res.* **11B** (11) 453-454, 1952.

2166. MITRA, S. K., Recent advances in our knowledge of the ionosphere. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 11-15, 1952.

2167. SINGH, RAM NETI, Predictions of the ionospheric conditions from the observations of fading pattern of radio-signals. *Agra. Univ. J. Res. (Sci.)* **1**, 143-151, 1952.

621.6 APPARATUS FOR CONVEYANCE AND STORAGE OF GASES AND LIQUIDS.

621.65/69 PUMPS

2168. KARASSIK, IGOR J. & CARTER, ROY, Vertical dry pit pumps. *Indian & East. Engr.* **CXI** (2) 233-237, 1952.

2169. KARASSIK, IGOR J. & CARTER, ROY, Vertical wet pit pumps. *Indian & East. Engr.* **CXI** (3) 391-397, 1952.

2170. KARASSIK, IGOR J. & CARTER, ROY, Factors involved in pump calculations. *Indian & East. Engr.* **CXI** (6) 885-889, 1952.

2171. KARASSIK, IGOR J. & CARTER, ROY, Construction materials I, II (centrifugal pump 14). *Indian & East. Engr.* **CXI** (4) 559-562, 1952. **CXI** (5) 733-736, 952.

2172. VAZ, J. E., Tests on "A" class Hume pipes. *New Irrig. Era.* **3** (1) 5-10, 1952.

2173. WALTER, LEO, Moisture removal from compressed air pipelines. *Indian & East Engr.* **CXI** (6) 907-912, 1952.

621.74 WORKSHOP PRACTICE

2174. CHAKRABARTI, N. G., Development of steel foundries in India. *Met. mark. Rev.* **5** (29) 19-22, 1952; **5** (29) 10-13, 1952.

2175. CHAKRABARTI, N. G., Steel foundry practices. *Met. mark. Rev.* **5** (40) 19-21, 1952; **5** (41) 13-15, 1952.

2176. DEWAZ, J. J., High quality steel castings at an economic price. *Indian & East. Engr.* **CXI** (4) 587-595, 1952.

2177. HORGAN, M. O'C., High frequency heating. *Indian & East. Engr.* **CXI** (4) 597-600, 1952.

2178. HIPPERSON, A. J., Scientific and mass production aspects of resistance welding. *Indian & East. Engr.* **CXI** (6) 895-904, 1952.

2179. KHANNA, G. C., Hints on hydraulic soundness of castings. *Met. mark. Rev.* **5** (29) 15-16, 1952.

2180. PEEL, E. W., Forging technique for aluminium alloys. *Indian & East. Engr.* **CXI** (5) 759-762, 1952.

2181. RIEDEL, J. V., Practical tool making. *Indian J. Engng. & Techn.* **4** (9) 224-228, 1952.

2182. SANDERSON, L., Bonding metals to non-metals. *Indian & East. Engr.* **CXI** (6) 891-894, 1952.

2183. SCHNUR, JOHN F., Improvement of foundry practice in India. *Met. mark. Rev.* **5** (42) 13-15, 1952.

2184. Rotary melting furnaces. *Indian & East. Engr.* **CXI** (4) 583-586, 1952.

621.8 LUBRICATION

2185. ALLAN, R. K., The manufacture of ball and roller bearings. *Indian & East. Engr.* **CXI** (3) 401-410, 1952.

2186. KARASSIK, IGOR J. & CARTER, ROY, Couplings and bedplates. *Indian & East. Engr.* **CXI** (1) 65-68, 1952.

2187. MARTINSON, E. O., For profitable crane and shovel ownership. *Indian J. Engng. & Techn.* **4** (11) 320-322, 1952.

621.9 MACHINE TOOLS

2188. NAGARKAR, G. P., A machine for field testing of welded bars. *J. Instn. Engrs. (India)* **33** (2) 193-194, 1952.

2189. SANDERSON, L., Machining stainless steel. *Indian & East. Engr.* **CXI** (2) 247-250, 1952.

2190. SARMA, R. K., Notes on the determination of rolling mill motor horse power. *Indian & East. Engr.* **CXI** (5) 913-916, 1952.

622 MINING
cf. also 865

2191. BARRACLOUGH, L. J., A further contribution to the history of the development of coal mining industry in India. *Trans. min. geol. & metallur. Inst. India* **47** (1) 2-22, 1951.

2192. BHADURY, B., Practical hints about the installations and maintenance of air-compressors suitable for mica mines. *Bull. geol. min. & metallur. Soc. India*, **11**, 55-60, 1952.

2193. BOSE, S. K., Necessity of electricity for the development of metalliferous mines in India. *Quart. J. geol. min. & metallur. Soc. India*, **24** (1-4) 43-46, 1952.

2194. CHAKRAVARTI, B. C., Lead-zinc mining and smelting in India. *Met. mark. Rev.* **5** (27) 21, 1952.

2195. CHATTERJEE, N. N., Certain problems facing India's mica industry. *Bull. geol. min. & metallur. Soc. India* **11**, 7-12, 1952.

2196. CHATTERJEE, N. N., Synthetic mica produced. *Bull. geol. min. & metallur. Soc. India* **11**, 73-76, 1952.

2197. CRAWLEY, A. E. & COUTTS, D. K., Cast iron pipes and sand stowing pipes (discussion). *Trans. min. geol. & metallur. Inst. India* **46** (3) 159-165; 166-170, 1950.

2198. IYER, L. A. N., Bihar's mica industry. *Bull. geol. min. & metallur. Soc. India* **11**, 19, 1952.

2199. JANI, B. A., Mica mining. *Bull. geol. min. & metallur. Soc. India* **11**, 51-54, 1952.

2200. KALE, S. C., Rock excavation and modern compressed air equipment—I & II. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (9) 6-13, 1952; **2** (10) 8-24, 1952.

2201. KALIA, A. N., Geological mapping in Bihar mica field. *Bull. geol. min. & metallur. Soc. India* **11**, 31-40, 1952.

2202. LARBY, W. G., Some recent developments in blasting practice. (discussion). *Trans. min. geol. & metallur. Inst. India* **46** (4) 197-211; 212-222, 1951.

2203. MAJUMDAR, K. K., Stability of collector films on mineral surfaces. (Lett.) *J. sci. industr. Res.* **11B** (9) 392, 1952.

2204. MAJUMDAR, K. K., On the role of alkali cyanides in the depression of pyrite. *J. sci. industr. Res.* **11B** (8) 344-346, 1952.

2205. MATHUR, S. M., Diamond cutting and polishing in Panna. *Indian Miner.* **5** (3) 125-127, 1951.

2206. MISHRA, HARIKANT, Mica mining-some practical suggestions. *Bull. geol. min. & metallur. Soc. India* **11**, 47-50, 1952.

2207. RAMNATHAN, S. N., Mining problems in Bihar mica fields. *Bull. geol. min. & metallur. Soc. India* **11**, 41-46, 1952.

2208. ROBB, W. D. & SMITH, W. E., Bhaladih sand station and railways and supplies and transport. (discussion). *Trans. min. geol. & metallur. Inst. India* **46** (4) 173-184; 185-196, 1951.

2209. SAHANA, D. B., Synthetic mica. *Bull. geol. min. & metallur. Soc. India* **11**, 65-72, 1952.

2210. SAHANA, D. B., The mica industry in India. *Bull. geol. min. & metallur. Soc. India* **11**, 3-4, 1952.

2211. SEN, M. C. & NARAYANAN, P. I. A., Beneficiation of low grade chrome ore from Talu, Mysore state. *J. sci. industr. Res.* **11A** (11) 505-506, 1952.

2212. SINHA, K. N., Application of pneumatic and mechanical methods of stowage in coal mines. (a discussion). *Trans. min. geol. & metallur. Inst. India* **47** (1) 51-70; 71-82, 1951.

2213. SINHA, K. N., A review of various factors associated with pneumatic stowage in coal mines. *Trans. min. geol. & metallur. Inst. India* **46** (3) 123-144, 1950. (Discussion) 145-158, 1950.

2214. SRIVASTAVA, A. N., Popular fallacies in the mica mining industry of Bihar. *Bull. geol. min. & metallur. Soc. India* **11**, 13-18, 1952.

2215. WATCHA, F. S., Mica from mine to market. *Bull. geol. min. & metallur. Soc. India* **11**, 25-26, 1952.

2216. WEST, W. D., Note on the Mica Industry. *Bull. geol. min. & metallur. Soc. India*, **11**, 77-79, 1952.

623 MILITARY ENGINEERING

2217. GABRIEL, R. C., Heavy lift cargoes. *J. Inst. milit. Engrs.* **4** (4) 245-248, 1952.

2218. HUNT, A. H. F., Naval gunnery from user's point of view. *Def. Sci. J.* **2** (1) 16-17, 1952.

2219. KARMARKAR, K. R., Rockets. *Def. Sci. J.* **2** (4) 218-221, 1952.

2220. KOTHARI, D. S., The internal ballistics of a leaking gun. *Def. Sci. J.* **2** (4) 201-207, 1952.

2221. KOTHARI, D. S., Defence science and its organisation. *Def. Sci. J.* **2** (2 & 3) 66-82, 1952.

2222. MITRA, B. N., Propellants. *Def. Sci. J.* **2** (1) 26-28, 1952.

2223. PATNAIK, B., American method and comparison of the different methods of internal ballistics. *Def. Sci. J.* **2** (1) 1-7, 1952.

2224. PARTHASARATHI, N. V. V., Army logistics. *Def. Sci. J.* **2** (1) 45-51, 1952.

2225. SIVARAMAKRISHNAN, G., The closed vessel apparatus at Kirkee. *Def. Sci. J.* **2** (1) 8-15, 1952.

2226. VAIDYA, W. M., Rocket flames. *Def. Sci. J.* **2** (4) 187-192, 1952.

2227. VARMA, R. S., A brief report on the discussion on the study of ballistics in the Universities. *Def. Sci. J.* **2** (4) 200, 1952.

624 CIVIL ENGINEERING

2228. CHATTERJEE, P. N., A numerical method for analysis of two-hinged elastic arches by deflection theory. *J. Instn. Engrs. (India)* **33** (2) 125-161, 1952.

2229. EAST PUNJAB PUBLIC WORKS DEPARTMENT, BUILDING AND ROADS BRANCH, Administration Report for the year 1947-1948, 1950. Pp 59.

2230. GOVT. OF MADRAS, PUBLIC WORKS DEPT., Annual Report of the Concrete Research Laboratory, 1951. Govt. of Madras. (Restricted.)

2231. JAIN, S. K., Cement concrete mix design. *Irrig. & Powr. J.* **9** (1) 90-109, 1952.

2232. KRISHNA JAI & JAIN, O. P., Plain and reinforced concrete. Vols. 1 & 2. Publ: Nem Chand & Bros. (Roorkee). Vol. I, Rs. 13/11/-; Pp 219. Vol. II, Rs. 16/8/-; Pp 322.

2233. SUBBARAMAN, K. N., Hollow concrete block construction process and problems. *Quart J. Techn. Bull.* **9** (107) 273-285, 1952.

624.1 EARTHWORKS. FOUNDATION. TUNNELLING

2234. BHANDARI, N. N., The past and future of detritus movement research. *Indian J. Engng. Techn.* **4** (11) 303-308, 1952.

2235. CHOPRA, S. K. & PATWARDHAN, N. K., Investigation on the use of lime-sludge as soil stabilizer. *J. sci. industr. Res.* **11B** (10) 434-437, 1952.

2236. MEHRA, S. R., Scientific exploitation of soil. *Irrig. & Powr. J.* **9** (1) 110-116, 1952.

2237. HEIPLE, DAN K., Earth moving. *Indian J. Engng. & Techn.* **4** (11) 278-279, 1952.

2238. HEIPLE, DAN K., Earth moving—an art and a science. *Indian J. Engng. & Techn.* **4** (9) 220-221, 1952. **4** (10) 255-259, 1952.

2239. SALDANHA, E. C., Selection of earths for the manufacture of bricks. *Irrig. & Powr. J.* **9** (1) 87-89, 1952.

2240. SUBBA RAO, K., Strategic use of soils in war operations. II. Trafficability of soils and methods of measurements. (A review). *Def. Sci. J.* **2** (1) 29-39, 1952.

ENGINEERING

2241-2260

2241. SUBBA RAO, K., Soil stabilization. *Def. Sci. J.* 2 (4) 208-217, 1952.

2242. VAJDA, A. de, Needs of successful soil conservation. *J. soil water. conserv. India* 1 (1) 9-10, 1952.

2243. VARDHAN, HARSH, Calcium chloride in stabilized soil roads and runways. *Def. Sci. J.* 2 (4) 222-231, 1952.

2244. VENKATACHARI, A. R., Fundamental principles in the design of earth dams. *New Irrig. Era* 3 (2) 53-55, 1952.

2245. Earth-moving machinery (Compiled by the Central Water and Power Commission, Government of India). Rs. 8/- Pp 274.

624.2/8 BRIDGE CONSTRUCTION

2246. BERY, M. N., Observations on the failure and rehabilitation of the wing walls and abutment of a 2.40 ft. B. G. Main line girder bridge in black cotton soil. *Quart. techn. Bull.* 9 (107) 264-270, 1952.

2247. GUPTA, S. N., Load test of the Kuakhai bridge. *J. Indian Rds. Congr.* 17 (1) 141-152, 1952.

2248. NAMBIAR, K. K. & NAMASIVAYAM, K., Paper No, 161.—“The investigation, design and construction of the Cauvery bridge at Puzalur”. *J. Indian Rds. Congr.* 17 (1) 68-134, 1952.

2249. Scientific Terminology-Bridges (Hindi). *J. Instn. Engrs. (India) (Hindi Suppl.)* 33 (1) 13-16, 1952.

2250. Scientific terminology—Bridges, (in Hindi). *J. Instn. Engrs. (India) (Hindi Suppl.)* 33 (2) 26, 1952.

624.9 STRUCTURAL ENGINEERING

2251. BRUCE-CAYTON, E. H., Prefabricated aeradio stations for the small airfield. *Indian & East. Engr. (Trans. Suppl.)* CXI (1) 103-106, 1952.

2252. MADDOX, A. M., Mass produced structures. *Irrig. & Powr. J.* 9 (3) 478-482, 1952.

625.1/6 RAILWAYS AND TRAMWAYS

2253. LYDALL, F. (late) & COCK, C. M., Co-ordination of power supply for railway electrification and other purposes. *Indian J. Engng. & Techn.* 4 (10) 242-248, 1952.

2254. MINISTRY OF RAILWAYS, RAILWAY BOARD, INDIA, Report of the 31st meeting of the carriage and wagons standards Committee, February, 1952. Calcutta. 1953, Pp. 90.

2255. ROY, N. K., Railway construction in India. Plant and stores. Technical Paper, 327, 1952. Pp. 56.

2256. TOWERS, H. C., Railway signalling and the human element. *Indian & East. Engr. (Trans. Suppl.)* 935-936, 1952.

2257. VERMA, P. L., Railway electrification and development of power projects in India. *Indian J. Engng. & Techn.* 4 (11) 282-288, 1952.

625.7 /8 ROADS

2258. CENTRAL ROAD RESEARCH INSTITUTE, OKHLA, DELHI, Some observations on Airfield runway surfacer. A bituminous and concrete surfaced runways. *J. Indian Rds. Congr.* 17 (1) 153-172, 1952.

2259. CHANDA, R. P., The importance of organization. *J. Indian Congr. Rds.* 16 (2) 205-221, 1952.

2260. CHANDA, R. P., Importance of organisation. Discussion on Paper No. 159. *J. Indian Rds. Congr.* 16 (4) 545-555, 1952.

2261. DUTTA, S. C., Elements of highway engineering. Publ. Pravash Chandra Dutta P. O. Indranagar, Jamshedpur. Rs. 6/8/-, Pp. 316.

2262. LAL, BRIJMOHAN, History of roads in India. *J. Instn. Engrs. (India) (Hindi Suppl.)* 3-8, 1952.

2263. LEWIS, ROBERT, C., Pre-treated aggregate improves street-surfacing operations. *Indian J. Engng. & Techn.* 4 (11) 276-277, 1952.

2264. NADIRSHAH, E. A., Grouted concrete roads. Discussion on Paper No. 157. *J. Indian Rds. Congr.* 16 (4) 517-536, 1952.

2265. PAL, S. C. & DAS, R. C., Construction of Shillong-Silchar road. Discussion on Paper No. 158. *J. Indian Rds. Congr.* 16 (4) 537-544, 1952.

2266. SIVAPRAKASAPILLAI, T. & SELVANAYAGAM, P., Roads in Ceylon-historical development and modern design methods. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 17-18, 1952.

2267. SPECIFICATIONS & STANDARDS COMMITTEE, Type designs for boundary and furlong stones. *J. Indian Rds. Congr.* 17 (1) 135-140, 1952.

2268. SPECIFICATIONS & STANDARDS COMMITTEE, INDIAN ROADS CONGRESS, "Vertical curves for highways". Discussion on Paper No. 156. *J. Indian Rds. Congr.* 16 (4) 506-516, 1952.

2269. SRIRANGACHARY, G., Design of road beds. Discussion on Paper No. 160. *J. Indian Rds. Congr.* 16 (4) 556-563, 1952.

2270. Basic Road Statistics of India-Second (1951) Supplement. Compiled by Consulting Engineer to Govt. of India (Roads). Publ : Manager of Publications, Delhi. Rs. 2/10/-, 4sh-3d. Pp. 59.

2271. Classified list of papers etc. and authors Index in this Proceedings 1-XVI. *J. Indian Rds. Congr.* 16 (4) 564-598, 1952.

626 HYDRAULIC ENGINEERING

2272. Annual Report of the International Commission on Irrigation and Drainage, 1950-52. Pp. 92.

626.81/85 IRRIGATION

2273. BHATTACHARYA, A. P., Statistical examination of losses on Upper Ganga canal. *Proc. 39th Indian Sci. Congr. Pt. IV (abstr.)* 1, 1952.

2274. FEDERAL OFFICE FOR LAND RECLAMATION AND IMPROVEMENT, BERNE, Irrigation in Switzerland. *Int. Comm. Irrig. Drain. Annu. Bull.* 1, 44-47, 1952.

2275. GARG, G. R., Chambal valley development. *Indian J. Powr & Riv. Vall. Develpt.* 2 (8) 1-9, 1952.

2276. GOYAL, B. D., Belan canal project. *J. Instn. Engrs. (India)* 33 (1) 1-10, 1952.

2277. HARIHARA IYER, K., Fluming in irrigation works. *Irrig. & Powr. J.* 9 (2) 233-245, 1952.

2278. JAEGER, CHARLES, Discharge regulators used in conjunction with irrigation. *Int. Comm. Irrig. Drain. Annu. Bull.* 1, 18-24, 1952.

2279. JAIN, K. L., Performance of electrically driven tube-wells with special reference to Ganga Hydroelectric grid in Uttar Pradesh. *Irrig. & Powr. J.* 9 (2) 256-268, 1952.

2280. JETHWANI, D. P., Darcy's and Bazin's experiments on flow of water in open channels. *Irrig. & Powr. J.* 9 (4) 523-534, 1952.

2281. MACDONALD, R. H., Irrigation of the Jordan Valley. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 82-84, 1952.

2282. MITRA, J. N., LAL, SARDARI, GUPTA, S. N., & Staff, Technical Memorandum No. 22. Uttar Pradesh P. W. D. Irrigation Research Institute-Annual Report on research progress during the year 1951. Lucknow, 1952. Pp. 289.

2283. NETHERLANDS NATIONAL COMMITTEE, New irrigation and drainage works in the Netherlands. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 60-67, 1952.

2284. RAJARATNAM, V.N., Ancient irrigation works and the methods adopted to improve them to conform to modern engineering practice. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* **20**, 1952.

2285. SANGHI, A., Design of tubewells for irrigation. *Irrig. & Powr. J.* **9** (1) 134-143, 1952.

2286. SANGHI, A., Design of tube wells for irrigation : Choice of radius of strainers with particular reference to cavity type of wells. *Irrig. & Powr. J.* **9** (4) 55-546, 1952.

2287. SANGHI, A., Design of tube wells for irrigation-II. Choice of L or length of strainers (strainer type of tube wells). *J. Instn. Engrs. (India)* **33** (1) 21-31, 1952.

2288. SEVIAN, VAHE J., Irrigation in Iraq. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 49-52, 1952.

2289. SULEIMAN, H., River Nile control major irrigation projects and programme for future development. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 53-60, 1952.

2290. TALWANI, B. S., GHOTANKAR, S. T., & APTE, A. S., Design of canal falls. *Irrig. & Powr. J.* **9** (2) 269-288, 1952.

2291. TEMPLEMAN-KLUIT, L. K., Graphical method to draw back water curves in open channels with steady flow. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* **17**, 1952.

2292. VASUDEV, Canal regulation at headworks. (Lett.) *Irrig. & Powr. J.*, **9** (2) 322-325, 1952.

2293. VISWESWARA RAO, J., Design criteria for infiltration galleries. *J. Instn. Engrs. (India)* **33** (1) 33-60, 1952, *New Irrig. Era* **2** (5) 5-14, 1952.

2294. Katraj Dam water supply scheme for Old Poona (Age, Two centuries) (in Hindi). *J. Instn. Engrs. (India) (Hindi Suppl.)* **33** (2) 17-20, 1952.

2295. Progress of Research work in Madras, A Irrigation Research Station, Poondi, Madras (1944-52). *New Irrig. Era* **3** (2) 61-64, 1952.

626.86 DRAINAGE

2296. MESSRS SULZER BROS., Modern developments in land drainage and irrigation pumping installations. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 32-35, 1952.

2297. SINGH, RAGHBIR, Patiala drainage and flood protection scheme. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 38-40, 1952.

626.87 RECLAMATION OF MARSHES ETC.

2298. DHAWAN, C. L., BHATNAGAR, B. B., SHARMA, R. N. & SINGH, AMRIK, Reclamation of alkali soils. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 25-31, 1952.

2299. SWISS NATIONAL COMMITTEE, Reclamation of the river Linth flood plain. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 41-43, 1952.

627 NATURAL WATERCOURSES. RIVER AND FLOOD CONTROL ENGINEERING

RIVER AND FLOOD CONTROL ENGINEERING

2300. DHIR, R. D., Sabarmati river multipurpose project. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (9) 1-5, 1952.

2301. GANGULI, M. K. & ROY, S. K., On the standardization of the relaxation treatment of systematic pressure computation for overflow spillway discharges. *Irrig. & Powr. J.* **9** (2) 187-204, 1952.

2302. GANGULI, M. K. & ROY, S. K., Development of three dimensional relaxation processes for a systematic approach to flow analysis in hydraulic structures. Pt. III.—flow through the inlet transition of a deep set sluiceway. *Irrig. & Powr. J.* **9** (1) 76-86, 1952.

2303. GUHA, B. C., Damodar valley project—an outline. *Indian J. Powr. & Riv. Vall. Devlpt.* (D. V. C. No.) 5-10, 1952.

2304. KHEDKER, V. R., The Subarnarekha basin—its industrial prospects. *Indian J. Powr. & Riv. Vall. Devlpt.* (DVC. No.) 39-42, 1952.

2305. KOMORA, A. M., DVC moves ahead. *Indian J. Powr. & Riv. Vall. Devlpt.* (DVC No.) 19-22, 1952.

2306. MADAN, M. L. & RAO, T. R. A., Applicability of various methods of determining design flood to Tapti catchment. *Irrig. & Powr. J.* **9** (3) 461-471, 1952.

2307. PANCHANG, G. M. & GANGULI, M. K., Unit Hydrograph method applied to Mahanadi catchment above Sambalpur. *Irrig. & Powr. J.* **9** (1) 67-75, 1952.

2308. PANCHANG, G. M., Use of frequency method for estimating rainfall intensities of rare occurrence with special reference to data of the Tapti basin. *Irrig. & Powr. J.* **9** (2) 312-320, 1952.

2309. ROY, S. K., Development of three dimensional relaxation processes for a systematic approach to flow analysis in hydraulic structures. Pt. I. *Irrig. & Powr. J.* **9** (1) 46-53, 1952.

2310. ROY, S. K. & GANGULI, M. K., Development of three dimensional relaxation processes for a systematic approach to flow analysis in hydraulic structures. Pt. II.—flow through sluiceway barrel. *Irrig. & Powr. J.* **9** (1) 57-66, 1952.

2311. SINHA, G., Algebraic derivation of unit hydrograph from a composite storm over four consecutive time intervals. (Lett.) *Irrig. & Powr. J.* **9** (1) 149-150, 1952.

2312. SINGH, G., Khosla's formula for runoff. (Lett.) *Irrig. & Powr. J.* **9** (1) 147-149, 1952.

2313. SOOD, M. L., Flood control on the Mississippi river. *Irrig. & Powr. J.* **9** (3) 472-473, 1952.

2314. SOOD, M. L., The Mahanadi Valley development. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (12) 1-6, 1952.

2315. Rivers in Madras: The Godawari River. *New Irrig. Era* **2** (5) 15-17, 1952.

2316. The Thambaraparni river. *New Irrig. Era* **2** (6) 13-16, 1952.

2317. Rivers in Madras—South Pennar. *New Irrig. Era* **3** (1) 22-23, 1952.

2318. Grand Anicut across Cauvery. *New Irrig. Era* **3** (2) 76-83, 1952.

627.43 WEIRS

2319. VISWESWARA RAO, J., The electrical analogy technique for the design of weirs on permeable foundations. *New Irrig. Era* **2** (6) 5-12, 1952.

627.5 LAND RECLAMATION

2320. MEHTA, M. L., Land reclamation, Vol. I. Publication No. 43, Central Board of Irrigation and Power. Available: Manager of Publications, Simla, Pp 117.

2321. NEWHOUSE, F., Flood protection scheme for the fens for the Great Ouse River Board. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 36-37, 1952.

2322. RAMAN, K. S. V., Land reclamation in the Damodar Valley. *Indian J. Powr. & Riv. Vall. Devlpt.* (DVC No.) 23-28, 1952.

RESERVOIRS. DAMS

2323. BANERJEE, S. L., GUHA, S. K. & RAM, GURDAS, A preliminary vibration experiment on the Khadkwasla dam (Poona). *Irrig. & Powr. J.* **9** (2) 222-232, 1952.

2324. CANAGARATNAM, J., Measurements of pore pressures and settlements in Gal Oya main dam. *Proc. Ceylon. Ass. Adv. Sci. (8th Annu. Sess.)* 18-19, 1952.

2325. CHIEF ENGINEER, TUNGBHADRA PROJECT, Tungbhadra project (India). *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 79-81, 1952.

2326. CEYLONSE NATIONAL COMMITTEE, The Gal Oya Dam-Ceylon. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 84, 1952.

2327. DAS, A. L., Barrage and Irrigation in the DVC. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (13) 35-38, 1952.

2328. HOON, R. C., BOSE, N. K., RAO, K. L. & CHATTERJEE, G. P., Thoughts on "Hirakud Dam Project". *Proc. 39th Indian Sci. Congr. Pt. IV* 135-139, 1952.

2329. KOSANAM, S. S., Composite dams. *Indian J. Powr. & Riv. Devlpt.* **2** (12) 11-16, 1952.

2330. MADANY, MOHAMED, The Nomogrammeter for the regulation of all types of calibrated regulators and barrages in Egypt. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 13-17, 1952.

2331. MALHOTRA, S. L., Nangal dam and canal, Punjab (India). *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 67-76, 1952.

2332. MOOKERJEA, D., Mayurakshi reservoir project. *J. Instn. Engrs. (India)* **33** (2) 11-19, 1952.

2333. NEELAKANTAPPA, N., Sedimentation of Krishnarajasagar reservoir in Mysore State. (Lett.) *Irrig. & Powr. J.* **9** (1) 144-147, 1952.

2334. PANDIT, G. N., Tapi valley development. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (13) 17-22, 1952.

2335. SAIN, KANWAR, Hirakud Dam project and its benefits. *Int. Comm. Irrig. Drain. Annu. Bull.* **1**, 76-79, 1952.

2336. SANWAL, DEVI D., The effect of crest on behaviour of a siphon spillway. *Irrig. & Powr. J.* **9** (3) 412-432, 1952.

2337. VENKANNA, D. S., Nugu reservoir project in Mysore. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (9) 14-18, 1952.

2338. Silting up of reservoirs. (in Hindi). *J. Instn. Engrs. (India). (Hindi Supp.)* **33** (2) 21-25, 1952.

2339. India and the TVA method (editorial), *Indian J. Powr. & Riv. Vall. Devlpt.* (DVC No.). 55-58, 1952.

2340. Aggregate cooling for dam building. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (12) 17-19, 1952.

STRUCTURES FOR HYDRAULIC POWER INSTALLATIONS

2341. RAM PRASAD, B. K., Power projects in Bombay State with special reference to Koyna hydroelectric project. *Indian J. Powr. & Riv. Vall. Devlpt.* **2** (8) 10-15, 1952.

ENGINEERING

2342-2361

628 SANITARY TECHNOLOGY. SEWARAGE

2342. BHASKARAN, T. R., Effect of organic manures on the oxygen budget in fish ponds. *Proc. nat. Inst. Sci. India* **18** (4) 257-259, 1952.

2343. MAJUMDER, N., Utilization of sludge gas. *Sci. & Cult.* **18** (6) 266-268, 1952.

2344. ROY, A. K., Note on the water supply of Shamgarh Railway Station. B. B. & C. I. Rly. (M. B.) *Irrig. & Powr. J.* **9** (2) 304-306, 1952.

2345. SINGH, PRITAM & SACHDEV, A. S., An irrigation project with no appreciable increase in malaria incidence. *J. Army med. Corps India* **8** (3) 144-148, 1952.

HEATING. AIR-CONDITIONING

2346. DIWANJI, K. S. K., Air-conditioning of Baroda auto exchange. *Telecom.* **2** (2) 86-98, 1952.

2347. Liquid petroleum gas for industrial heating. *Indian & East. Engrs.* **CXI** (2) 241-246, 1952.

629.1 LOCOMOTION. TRANSPORT ENGINEERING

2348. BOWHILL, FREDERICK, The Flying-boat and place in aviation. *Indian & East. Engr.* **CXI** (5) 785-788, 1952.

2349. CHATURVEDI, M. S., Development of aircraft industry in India. *Def. Sci. J.* **2** (4) 193-199, 1952.

2350. CIVIL AVIATION DEPARTMENT, (Techn. Centre), New Delhi. Specifications for intermediary training glider, model IT-GI. (Duplicated), 1952. Pp 4.

2351. CIVIL AVIATION DEPT., (Techn. Centre), New Delhi. Note on the application of De Forest Scratch gauges to propeller tests. (Duplicated), 1952. Pp 3.

2352. GORDON, ALEXANDER, Do you know your transport costs—or guess them. *Indian & East. Engr. (Transp. Suppl.)* **CXI** (1) 119-121, 1952.

2353. GRIFFITHS, T. G., Aluminium and the road transport vehicle body. *Indian & East Engr. (Transp. Suppl.)* **CXI** (1) 109-117, 1952.

2354. MAJENDIE, A. M. A., The operation of Turbo-jet civil aircraft. *Indian & East Engr. (Transp. Suppl.)* **CXI** (3) 453-462, 1952.

2355. NILAKANTAN, P. & KRISHNAMURTHY, T. S., Take off ground run of aeroplanes. *J. Aero. Soc. India* **4** (4) 119-131, 1952.

2356. RASPET, AUGUST, Determination of the Drag polar of the Cessna 120 Airplane in gliding flight. *J. Aero. Soc. India* **4** (4) 115-119, 1952.

2357. REPENTHIN, W., Aeronautical science today. *J. Madras Inst. Techn.* **1** (1) 33-63, 1952.

63 AGRICULTURE

GENERAL

2358. INDIAN COUNCIL OF AGRICULTURAL RESEARCH, Annual Report of the Indian Council of Agricultural Research for 1950-51. Pp 170. New Delhi.

2359. INSTITUTE OF AGRICULTURE, ANAND, Annual Report for the year 1950-51. General Series Bull No. 11, Pp 32.

2360. ANAND, DAVENDAR M. & ORCHARD, MALCOLM Some suggestion for a village worker. *Indian Fmg.* **2** (3) 22-25, 1952.

2361. CHATTERJI, U. N., Winning over the farmer. *Indian Fmg.* **2** (4) 8-10, 1952.

2362. DURAI SWAMI, S. V. & NARASIMHAN, V. S., A review of the rural economic conditions of the Coimbatore district as revealed in the economic surveys of some villages in the district. *Madras agric. J.* **39** (11) 569-579, 1952.

2363. ENSMINGER, DOUGALS, Village extension work. *Indian Fmg.* **2** (4) 12-13, 1952. **2** (5) 15-16, 1952.

2364. GREEN, T. L., Agriculture and social progress in Ceylon. *Ceylon teach.* **16** (75) 114-118, 1952.

2365. I. A. R. I. Scientific Reports of the Indian Agricultural Research Institute (for the year ended 20th June 1950). Pp. 101. Rs. 3/12/-, 6sh. Available: Manager of Publications, Delhi.

2366. KOSHY, T. A., Extension education. *Allahabad Farm.* **26** (6) 223-231, 1952.

2367. KULKARNI, K. R., Agricultural marketing in India with special reference to co-operative marketing of agricultural produce in India. Bombay, 1951.

2368. KUMAR, L. S. S., Agriculture as a career. *Poona agric. coll. mag.* **43** (3 & 4) 136-139, 1952-53.

2369. MINISTRY OF FOOD AND AGRICULTURE, GOVT. OF INDIA, Directorate of Economics and Statistics. Agricultural legislation in India. Vol. III. Agricultural production and development. Delhi, 1952.

2370. MIRCHANDANI, R. T., Market news service for farmers. *Indian Fmg.* **2** (6) 10-12, 1952.

2371. PAL, B. P., How botany aids agriculture. *Everyday Sci.* **1** (1) 70-72, 1952.

2372. SINGH, HARKIRAT, The problem of disseminating agricultural information. *Indian Fmg.* **2** (8) 26-27, 1952.

2373. ZACHARIAS, C. W. B., Madras agriculture. Madras, 1950.

631.3 AGRICULTURAL TOOLS AND MACHINERY

2374. HUNGERFORD, T. A. G., They fill 200000 rice bowls each year. *Indian Fmg.* **2** (5) 28-30, 1952.

2375. KAHLOH, KARTAR SINGH, Tractor implements. *Punjab Farm.* **4** (1) 167-169, 1952.

2376. KHAN, A. R., PAR, C H. & ROY, S.K., Operating costs of a farm tractor at Karnal. *Indian J. agric. Sci.* **22** (Pt. 3) 293-298, 1952.

2377. RAMIAH, R. V., What is new in agricultural engineering. *Indian Fmg.* **2** (4) 16-17, 1952.

2378. SMITH, J. C. & PANDEY, DEVKI, Tractor aur Khoti. (in Hindi). Lucknow, 1950.

2379. VAUGH, MASON, Improved agricultural implements, their suitability for different tracts, economics and popularisation. *Allahabad Farm.* **26** (4) 121-126, 1952.

631.4 SOIL SCIENCE

cf. also 1007, 1178-1180, 2570

2380. BASU, J. K. & PURANIK, N. B., Characteristics of the river valley erosion as a major factor in soil conservation planning. *J. Soil. wat. conserv. India.* **1** (1) 11-15, 1952.

2381. BASU, J. K., REGE, N. D. & DESHPANDE, R. P., The role of phosphate in dry land agriculture. *Poona agric. coll. mag.* **43** (3 & 4) 147-150, 1952-53.

2382. BHOUMIK, N. P., Problem of soil erosion and land reclamation in India. *Indian J. Powr. & Riv. Vall. Develpt.* **2** (9) 19-28, 1952.

2383. BISWAS, T. D., Trace elements in soils and plants. *Sci. & Cult.* **18** (4) 173-179, 1952.

2384. BUREAU OF AGRICULTURAL INFORMATION, UTTAR PRADESH, Planning for soil conservation in U. P. (Uttar Pradesh me Bhumi Rakeehan Yagna). Uttar Pradesh, 1952.

2385. CHAKRABARTY, N. K., BASU, P. & NANDI, P., Antibiotic activities of some fungi from the soils of West Bengal. *Bull. bot. Soc. Bengal* **5** (2) 127-137, 1951.

2386. DAKSHINDAS, D. G., Increasing yields by combating erosion on the students' farm. *Indian Fmg.* **2** (7) 24-25, 1952.

2387. DAS, S. C., RAO, AMBADAS & TAMHANE, R. V., Electrochemical properties of hydrogen clays from contiguous black and red soils from Bhopal. (Lett.) *Cur. Sci.* **21** (9) 245-246, 1952.

2388. DATTA, N. P., Micronutrient deficiencies in crops in relation to some South Indian soils (Symposia). *Proc. 39th Indian Sci. Congr. Pt. IV*, 100-107, 1952.

2389. DESAI, S. V. & SEN, ABHISWAR, Occurrence of sodium chloride in Indian soils. *Indian J. agric. Sci.* **22** (Pt. I) 63-73, 1952.

2390. DESAI, S. V. & SUBBIAH, B. V., Relative value of nitrogen and phosphate in some organic manures and inorganic fertilisers and their combinations as judged by their recovery by crops. *Proc. Indian Acad. Sci.* **36B** (5) 181-190, 1952.

2391. DESAI, S. V. & SUBBIAH, B. V., Availability of nitrogen in soils and manures. *Indian J. agric. Res.* **22** (Pt. II) 167-173, 1952.

2392. DHAR, N. R., New aspects of the value of phosphates and carbonates in land fertility. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. 2) 156-165, 1952.

2393. DHAR, N. R. & AGARWAL, C. P., Nitrogen loss in soils on the application of ammonium sulphate and retardation on the addition of coals. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. I) 33-40, 1952.

2394. DHAR, N. R. & AGARWAL, C. P., Nitrogen loss in soil on the application of oil cake and its retardation by the addition of coal. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. I) 45-50, 1952.

2395. DHAR, N. R., BOSE, S. M., SINHA, S. B. & GHOSH, S. K., Efficiency of different methods of nitrogen fixation. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. 2) 137-155, 1952.

2396. DHAR, N. R., CHATTERJI, B. G., PANT, N. N. & SAXENA, B. B. L., The relative influence of surface and bacterial oxidations in the fixation of nitrogen. *Proc. nat. Acad. Sci. (India)* **21A** (Pt. 2) 126-136, 1952.

2397. JOSHI, N. V. & KELKAR, B. V., The role of earthworms in soil fertility. *Indian J. agric. Res.* **22** (Pt. II) 189-196, 1952.

2398. KANDIAH, S., Soil surveys for colonisation schemes. *Proc. Ceylon Assoc. Adv. Sci. (8th Annu. Sess.)* 12-13, 1952. *Trop. Agric.* CVIII (4) 266-268, 1952.

2399. KASINATHAN, S. & SINGH, SANT, Studies of the soils of the Gangetic alluvium : I. A Karail formation from the Shahabad area. *J. Sci. Res. Banaras Hindu Soc.* II, 210-218, 1951-52.

2400. KIBE, M. M. & BASU, J. K., The effect of different soils and crop management practices on the water stable structure of the soil. *J. Univ. Poona.* **1** (2) 1-13, 1952.

2401. KIBE, M. M. & NARAYAN, N., The depletion of lime from a paddy soil of the Kolaba district as a result of fertilisation with sulphate of ammonia. *J. Univ. Poona* **1** (2) 14-16, 1952.

2402. PRAKASH, RAVI & SAKSENA, R. K., Decomposition of paddy and bajra (*Pennisetum typhoideum*) straws by fungi commonly found in Allahabad soils. *Proc. Indian Acad. Sci.* **36B** (3) 119-128, 1952.

2403. RAM, NEWTON & BHATTACHARYA, ABANI K., Systematic investigation of soil organic matter with particular emphasis on the soil hydrolystes of Agra soil. I. Preliminary analysis of the hydrolysable organic matter in the soil. *Indian J. agric. Sci.* **22** (Pt. 3) 235-245, 1952.

2404. RAMA MOORTHY, B. & DESAI, S. V. & RAY CHAUDHURI, S. P., Potassium fixation in soils with special reference to India. *Indian J. agric. Sci.* **22** (Pt. I) 49-62, 1952.

2405. RAYCHAUDHURI, S. P., Desert soils and desert farming. *Bull. nat. Inst. Sci. India* **1**, 266-268, 1952.

2406. RAYCHAUDHURI, S. P., A suggested procedure for soil conservation survey. *J. soil wat. conserv. India* **1** (1) 23-25, 1952.

2407. RAYCHAUDHURI, S. P. & SANKARAM, A., Studies on the saline soils of the Delhi state. I. Some typical profiles of the Jamuna Khadar area. *Indian J. agric. Sci.* **22** (Pt. 3) 209-222, 1952.

2408. RAYCHAUDHURI, S. P. & SANKARAM, A., Methods of soil survey in different countries of the world. *Indian J. agric. Sci.* **22** (Pt. 3) 247-256, 1952.

2409. RAYCHAUDHURI, S. P. & SEN, N., Certain geomorphological aspects of the Rajputana desert. *Bull. nat. Inst. Sci. India* **1**, 249-253, 1952.

2410. RAYCHAUDHURI, S. P. & SUBBIAH, B. V., Do you know your soil? *Indian Fmg.* **2** (5) 20-22, 1952.

2411. RAYCHAUDHURI, S. P. & SUBBIAH, B. V., The role of chemistry in the development of Indian agriculture. *Souvenir Instn. Chem. (India)* 43-48, 1952.

2412. SANYASI RAJU, M. & KUNHIRAMA MENON, P., Soil survey in Madras. *Madras agric. J.* **39** (9) 463-467, 1952.

2413. SATYANARAYANA, G. & KALYANASUNDARAM, R., Soil conditions and root diseases. V. Symptomatology of wilted cotton and red gram. *Proc. Indian Acad. Sci.* **36B** (2) 54-58, 1952.

2414. SEN, B. R. & LAL, MANOHAR, The pF value of liquid limit of soils. (Lett). *J. sci. industr. Res.* **11B** (10) 451-452, 1952.

2415. SEN, SUDHIR, Soil conservation—some social and economic aspects. *J. soil wat. conserv. India* **1** (1) 16-20, 1952.

2416. SULOCHANA, C. B. (Miss), Soil conditions and root diseases; IV. The effect of micro-elements on the occurrence of bacteria, actinomycetes and fungi in soils. *Proc. Indian Acad. Sci.* **36B** (1) 19-33, 1952.

2417. SULOCHANA, C. B. (Miss), Soil conditions and root diseases. VI. Germination of conidia of *Fusarium vasinfectum* in micro-element amended soils. *Proc. Indian Acad. Sci.* **36B** (6) 229-233, 1952.

2418. TAMHANE, R. V., Land utilisation and soil studies. *Sci. & Cult.* **18** (6) 272-274, 1952.

2419. TAMHANE, V. A., Soils of the Rajputana and Sind deserts. *Bull. nat. Inst. Sci. India* **1**, 254-259, 1952.

2420. VERSLUYS, J. D. N., Soil implications of measures for soil conservation.—Experiences in Indonesia. *J. soil wat. conserv. India* **1** (1) 39-46, 1952.

2421. WHYTE, R. O., The agronomy of soil conservation. *J. soil. wat. conserv. India* **1** (1) 21-23, 1952.

631.5 METHODS OF CULTIVATION
cf. also 2571, 2583

2422. ACHARYA, C. N., JAIN, S. P. & JHA, J., Influence of legumes in crop rotation on the soil. (Lett). *Sci. & Cult.* **18** (6) 286-287, 1952.

2423. GILL, AJIT SINGH, Stand of crops and its importance. *Punjab Farm.* 4 (1) 178-179, 1952.

2424. JEVASEELAN, K. N., A note on a method of transplanting. (research note). *Trop. Agric.* CVIII (3) 200-201, 1952.

2425. KULKARNI, N. B., Tree culture. *Poona agric. coll. mag.* 43 (1) 19-24, 1952.

2426. MAHESWARIAH, B. M., Some indigenous structures used for grain storage in rural parts of Mysore. *Mysore agric. J.* 28 (3) 37-45, 1952.

2427. PATIL, S. S., Scope of hormones in the use of increasing crop yields. *Poona agric. coll. mag.* 43 (1) 7-14, 1952.

2428. RAHEJA, P. C. & OBHRAI, S. R., Do catch crops pay in rotations? *Indian Fmg.* 2 (6) 16-18, 1952.

2429. ROY, T. C., Investigations on the effect of seed treatment of flax (*Linum usitatissimum* L) in Bengal. *Indian Phytopath.* 4 (2) 116-118, 1951.

2430. SINGH, BHOLA NATH, Seed rate and crop density in crop production. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 41, 1952.

2431. SINGH, BHOLA NATH, Effect of seed rate, manuring, irrigation, fallowing and cropping of single and mixed crops on weed infestation on farm land. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 41-42, 1952.

2432. SINGH, BHOLA NATH & DIXIT, NARENDRA NATH, Effect of fallowing and cropping on weed infestation on farm land. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 42, 1952.

2433. SINGH, BHOLA NATH, Effect of manuring, irrigation, fallowing and cropping in single and mixed cultures on weed infestation of farm land. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 42-43, 1952.

2434. SINGH, BHOLA NATH, Experiments on mixed cropping practices: Effect of changing proportion of seed rates on growth and yield of associates. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 48-49, 1952.

2435. SINGH, BHOLA NATH, Effect of rotation on soil fertility, growth and yield of crops. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 49-50, 1952.

2436. SINGH, RAJENDRA PAL, Low yield of crops in India with special reference to Uttar Pradesh. *Allahabad Farm.* 26 (4) 95-104, 1952.

631.6 CLEARING. IRRIGATION. DRAINAGE

cf. 2426-2552

2437. CHATURVEDI, M. D., The Rajputana desert—a scheme for its immobilization. *Indian Forestr.* 78 (10) 486-489, 1952.

2438. HAKIM, A. A., The design of small ponds for minor irrigation schemes. *J. soil wat. conserv. India* 1 (1) 34-38, 1952.

2439. HOON, R. C., Agri-irrigational potentialities of land commanded by some of the proposed multi-purpose projects in India. *Irrig. & Powr. J.* 9 (3) 438-444, 1952.

2440. KANITKAR, N. V., Rajputana desert and its reclamation by dry farming methods. *Bull. nat. Inst. Sci. India* 1, 260-265, 1952.

2441. LIVERA, E.J., Productive land use in Ceylon. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 9, 1952.

2442. SINGH, NARINJAN, Reclamation and cultivation of land in "Bet areas" by tractors. *Punjab Farm.* 4 (1) 170-175, 1952.

631.8 FERTILIZERS. MANURING

cf. also 1023, 1035, 1036, 2390-2394, 2401, 2431-2433, 2530, 2531, 2535, 2616-2618, 2679

2443. ACHARYA, C. N., Compost manure. *Indian Fmg.* 2 (4) 23-24, 1952.

2444. ACHARYA, C. N., Utilization of indigenous manurial resources of India. *Souvenir Instn. Chem. (India)* 123-128, 1952.

2445. AGARWALA, O. P., Review of Indian literature on minerals and trace elements in nutrition. *Allahabad Farm.* 26 (4) 105-109, 1952.

2446. BALASUBRAMANIAM, C. & JAYARAMAN, M. V., Review of literature on rainfalls as fertilizers. *Madras agric. J.* 39 (10) 519-520, 1952.

2447. BHIDE, N. N., Effect of phosphate manuring to previous leguminous crops on the yield of succeeding cotton crop. *Indian cott. grow. Rev.* 6 (4) 187-192, 1952.

2448. CHAVAN, V. M. & PATIL, G. G., Review of green manuring methods already adopted and further measures to popularise its use for increasing yield particularly of food crops. *Poona agric. coll. mag.* 43 (2) 70-78, 1952.

2449. CHHONKAR, V. S., The effect of nitrogen fertilization on the chemical composition of the leaves of peach trees. *Agra Univ. J. Res. (Sci.)* 1, 131-141, 1952.

2450. DABADGHAO, P. M., SEN, S. & BAINS, S. S., Ley farming experiment. 1. Effect of different fertilizers on the yield and quality of Rhodes grass (*Chloris gayana*) and lucerne (*Medicago sativa*) mixtures. *Indian J. agric. Res.* 22 (Pt. II) 175-181, 1952.

2451. DHAR, N. R., GHILDYAL, B. N. P., AGARWAL, C. P. & FRANCIS, A. M., Coals and their use as manure. *Proc. nat. Acad. Sci. India* 19A (Pts. V & VI) 201-272, 1950.

2452. GADRE, G. T. & GUPTA, J., The problem of phosphate fertilizers in India. *Sci. & Cult.* 18 (4) 165-166, 1952.

2453. GOVINDARAJAN, S. V. & VENKATA RAO, B. V., Manures and fertilizers: Their efficient and effective use for increased crop production. *Mysore agric. J.* 28 (4) 77-91, 1952.

2454. GUPTA, N. D., Recommendations in regard to manuring of Raya L-18. *Punjab Farm.* 4 (4) 306-308, 1952.

2455. IDNANI, M. A., Scope and limitations of sulphate of ammonia as fertilizer in India. *Sci. & Cult.* 18 (2) 76-78, 1952.

2456. JOHN, T. J., Green manure for arecanut plantation. *Month. Bull. Indian centr. arecanut Comm.* 3 (1) 1-4, 1952.

2457. JOSHI, N. V. & JOSHI, S. G., Effect of copper sulphate on rice in the Bombay state. (Lett.) *Sci. & Cult.* 18 (2) 96-97, 1952.

2458. KHAN, A. R. & MATHUR, B. P., Ploughing is manuring. *Indian Fmg. (N. S.)* 2 (9) 14-15, 1952.

2459. MALLIK, P. C. & DE, B. N., Manures and manuring of the mango and the economics of mango culture. *Indian J. agric. Res.* 22 (Pt. II) 151-166, 1952.

2460. NIJHAWAN, SUKH DAYAL & SINGH GURBUX, Balanced use for fertilisers for berseem. *Punjab Farm.* 4 (2) 216-217, 1952.

2461. PANDYA, P. S. & PATIL, G. C., A review of experiments on green manuring in the Bombay state. *Poona agric. coll. mag.* 43 (3 & 4) 140-146, 1952-53.

2462. RAYCHAUDHURI, S. P., Chemical fertilizers and soil productivity. *Indian J. agric. Sci.* 22 (Pt. 3) 223-234, 1952.

2463. SAHASRABUDHE, D. L. & LELEY, V. K., Relative utility of different phosphatic fertilizers in four Bombay soils. *J. Univ. Poona* **1** (2) 17-20, 1952.

2464. SEN, S. & BAINS, SHER SINGH, Role of legumes and green manuring in mixed farming holdings. *Indian J. agric. Sci.* **22** (Pt. I) 33-48, 1952.

2465. SEN, S. & BAINS, SHER SINGH, Effects of phosphate manuring with and without potash on the yield and quality of berseem fodder. *Indian J. agric. Sci.* **22** (Pt. 3) 257-265, 1952.

2466. SINGH, BHOLA NATH, Experiments on mixed cropping practices: Effect of manuring and irrigation on growth and yield of crops grown singly and mixed. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 49, 1952.

2467. SINGH, BHOLA NATH, Residual effect on the succeeding crops of added combined forms of nitrogen. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 46, 1952.

2468. SINGH, BHOLA NATH, Importance of correct proportion of added manures and its economic value in crop production. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 46, 1952.

2469. SINGH, BHOLA NATH, Effect of calcium, sulphur and phosphorus on growth and yield of crops. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 45-46, 1952.

2470. SINGH, BHOLA NATH, Manurial efficiency in determining plant population on unit soil surface and relative crop returns. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 44, 1952.

2471. SUNDARA RAO, W. V. B. & GHOSH, A. B., Green manuring. *Sci. & Cult.* **18** (4) 170-173, 1952.

2472. VAIDYANATHAN, L. V., KUPPUSWAMY, S. V. & CHOKANNA, N. C., Green manures and coffee **16** (8) 1952.

2473. VALUNJKAR, G. R., Bone meal and its manufacture. *Indian Fmg.* **2** (8) 12-14, 1952.

2474. VENKATA RAM, C. S. & SRINIVASA PAI, K. V., Fertilization value of tank silts. II. Phosphorus and reproductive vigour of *Oryza sativa* L. *Proc. Indian Acad. Sci.* **36 B** (2) 81-84, 1952.

2475. VERMA, R. D., A simple device for the placement of fertilizers. *Indian Fmg.* **2** (4) 27, 1952.

2476. VERMA, R. D., How to get the maximum benefit from the application of fertilizers. *Indian Fmg.* **2** (7) 30-31, 1952.

cf. also 2586 631.9 OTHER TOPICS

2477. GORRIE, R. M., The contribution of exotic trees to water conservation in Ceylon montane catchments. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 13, 1952.

2478. KAUSHIK, R. D., A review of factors affecting crop association. *Punjab Farm.* **4** (2) 218-224, 1952.

2479. KYAW, U., Agricultural land utilization, Insein district, Burma. *M. A. thesis. Univ. Rangoon*, 1952.

632 PROTECTION OF PLANTS. DISEASES AND PESTS

2480. ROY, P. S. & SHARMA, CHANDRESHWAR, Diseases and pests and bananas and their control. *Indian J. Hort.* **9** (4) 39-52, 1952.

2481. SRINIVASAN, U. C., Diseases of fodder crops in India. I. Sorghum. *Mysore agric. J.* **28** (3) 46-51, 1952.

2482. SRINIVASAN, U. C., Diseases of fodder crops in India. II. Maize. *Mysore agric. J.* **28** (4) 92-101, 1952.

2483. VASUDEVA, R. S. & GATTANI, M. L., Assessment of losses caused by plant diseases. *Indian J. agric. Sci.* **21** (Pt. IV) 409-412, 1951.

2484. A note on root diseases of rubber in India. *Indian Rub. Bd. Bull* **2** (3 & 4) 37-41, 1952.

632.1 PHYSIOLOGICAL DISEASES

2485. BEDI, KISHAN SINGH & PRACER, CAETAN, SARUP, Gram wilt disease and its control in the Punjab. *Punjab Farm.* **4** (4) 296-301, 1952.

2486. DASTUR, R. H. SINGH, KANWAR & KAIWAR, S. R., Investigation on the red leaf disease in American cottons. II. Red leaf disease in American cottons in Malwa and Bombay Karnatak. *Indian cott. grow. Rev.* **6** (4) 193-204, 1951.

2487. VERMA, G. S., The formation of lesions by gases on mango fruits. *J. Indian bot. Soc.* **31** (4) 316-341, 1952.

632.3 BACTERIAL DISEASES, VIRUS DISEASES

2488. CAPOOR, S. P., Observation on the sterility disease of pigeon pea. *Indian J. agric. Sci.* **22** (Pt. 3) 271-274, 1952.

2489. CAPOOR, S. P., Culture box: a practical device for collecting, preserving and transporting virus affected plant material. *Indian J. agric. Sci.* **22** (Pt. 3) 299-302, 1952.

2490. CAPOOR, S. P. & VARMA, P. M., Studies on the "distortion", mosaic virus of *Datura inoxia* Mill. *Indian J. agric. Sci.* **22** (Pt. 3) 303-314, 1952.

2491. PATEL, M. K. BHAT, V. V. & KULKARNI, Y. S., Three new bacterial diseases of plants from Bombay. *Indian Phytopath.* **4** (2) 144-151, 1951.

2492. PATEL, M. K., KULKARNI, Y. S. & DHANDE, G. W., Some new bacterial diseases of plants. (Lett.) *Cur. Sci.* **21** (12) 345-346, 1952.

2493. PATEL, M. K., WANKAR, B. N. & KULKARNI, Y. S., Bacterial leaf-spot of *Amaranthus viridis* L. (Lett.) *Cur. Sci.* **21** (12) 346-347, 1952.

2494. SUNDARAM, N. V., New host for *Xanthomonas malvacearum* (Smith) Dowson (Lett.) *Cur. Sci.* **21** (11) 320, 1952.

2495. VARMA, P. M., Studies on the relationship of the bhendi yellow vein-mosaic virus and its vector, the white-fly (*Bemisia tabaci* Gen.) *Indian J. agric. Sci.* **22** (Pt. I) 75-91, 1952.

632.4 FUNGOUS DISEASES

2496. BAKSHI, B. K., Seeding blight and foot rot of cereals caused by *Fusarium avenaceum* (Fr.) Sacc. and *Fusarium culmorum* (W. G. Sm) Sacc. *Indian Phytopath.* **4** (2) 162-169, 1951.

2497. BEDI, KISHAN SINGH, Loose smut of wheat and its control in the Punjab on a large scale by solar heat. *Punjab Farm.* **4** (4) 302-303, 1952.

2498. BHIDE, V. P., PATEL, M. K. & DHANDE, G. W., *Fusarium* wilt of lang (*Lathyrus sativus* L) isolation of wilt resistant types. *Indian Phytopath.* **4** (2) 181-188, 1951.

2499. CHOWDHURY, S., Some observations on Citrus canker in Assam (Lett.) *Sci. & Cult.* **18** (5) 246-248, 1952.

2500. GUPTA, B. M., Symposium on "Red Rot of Sugarcane". *Proc. 39th Indian Sci. Congr.* Pt. IV, 108, 1952.

2501. KAMAT, M. N., PATEL, M. K. & DHANDE, G. W., Occurrence of the green muscardine fungus on *Pyrilla* sp. in Bombay (Lett.) *Cur. Sci.* **21** (11) 317, 1952.

2502. MAHMUD, K. A., Pythium damping-off of brinjal seedlings. (Lett.) *Sci. & Cult.* **18** (3) 149-150, 1952.

2503. PAYAK, M. M., Mycological musings. *Poona agric. coll. mag.* **43** (1) 25-29, 1952.

2504. PEIRIS, J. W. L., Late blight of potato (research note). *Trop. agric.* **CVIII** (3) 200, 1952.

2505. SAFEEULLA, K. M. & GOVINDU, H. C., Notes on two synchytrium species. (Lett.) *Cur. Sci.* **21** (11) 319-320, 1952.

2506. SHARMA, S. L., Pathogenicity of *Puccinea Kuehnii* (Krueg) Butler on sugarcane in Bihar (Lett.) *Cur. Sci.* **21** (10) 288, 1952.

2507. SINGH, HARBANS & ADLAKHA, PURAN ANAND, Red-rot disease of sugarcane and its control. *Punjab Farm.* **4** (2) 215, 1952.

2508. SRINIVASAN, K. V., Seedling blight of *Sesbania grandiflora* Pers. (Lett.) *Cur. Sci.* **21** (11) 318, 1952.

2509. TANDON, R. N., SINGH, BABU & GREWAL, JAWAND SINGH, Leaf spot disease of Litchi (*Nephelium Litchi* Camb.). *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 1-5) 21-27, 1952.

2510. VENKATAKRISHNIAH, N. S., *Glomerella psidii* (Del.) Sheld and *Pestalotia psidii* Pat. associated with a cankerous disease of guava. *Proc. Indian Acad. Sci.* **36B** (3) 129-134, 1952.

632.5 NOXIOUS WEEDS, PARASITIC PLANTS

cf. also 2431-2433

2511. DESHPANDE, R. B., Pohli—an armed enemy of the farmer. *Indian Fmg. (N. S.)* **2** (9) 12-13, 1952.

2512. GLOVER, P. M., The weed problem in plantation crops—Weeds in tea. *Pltrs. Chron.* **47** (20) 535-539, 1952.

2513. KAIMAL, K. N., Weeds and cover plants in rubber plantations. *Pltrs. Chron.* **47** (21) 575-581, 1952.

2514. KAUL, R. N. & RAHEJA, P. C., A review of weeds and their control. *Sci. & Cult.* **18** (3) 124-128, 1952.

2515. MAYNE, W. W., Weeds as a problem in crop ecology. *Pltrs. Chron.* **47** (19) 515-520, 1952.

2516. MEENAKSHI, K. & KRISHNA RAO, P., The occurrence of *Striga* on *Cyanotis cucullata* (research note). *Madras agric. J.* **39** (9) 490, 1952.

632.7 NOXIOUS INSECTS

2517. BANERJEE, SAURENDRANATH & CHATTERJEE, NIRMAL CHANDRA, *Gonocephalum planatum* Walker, a new pest in India on mulberry seedling and its control. (Lett.) *Sci. & Cult.* **18** (1) 36-37, 1952.

2518. BHATIA, D. R. & SIKKA, H. L., The singhara beetle (*Galerucella birmanica* Jacoby—Chrysomelidae) in Delhi area and its control. *Indian J. Entom.* **14** (3) 239-242, 1952.

2519. JOSEPH, K. J., Contributions to our knowledge of fig-insects (Chalcidoidea : parasitic Hymenoptera) from India. On a new species of *Lipothymus Grandi* from *Ficus hispida* Linu. *Agra Univ. J. Res. (Sci.)* **1**, 73-82, 1952.

2520. KHANNA, S. S., Biology of *Deporaus marginatus*, Pasc (Curculionidae—Coleoptera). *Proc. nat. Acad. Sci. (India)* **21B** (Pts. 1-5) 72-79, 1952.

2521. KRISHNASWAMY, S. & NAGARAJA RAO, K. R., A note on the mealy bug *Pseudococcus virgatus* Cockrell, on *Gliricidia maculata* H & B and its control. *Madras agric. J.* **39** (12) 600-604, 1952.

2522. MANI, M. S., Some gall-midges (Honididae : Diptera) associated with *Mangifera indica* Linn in India and their galls. *Agra Univ. J. Res. (Sci.)* **1**, 47-54, 1952.

2523. PATEL, G. A. & KULKARNI, H. L., *Cerciaphis emblica* sp. nov. (Fam. Aphididae) a new aphid pest on *Emblica officinalis*. (Lett.) *Cur. Sci.* **21** (12) 350, 1952.

2524. RAJA RAO, S. A., A new record of Hymenopterous parasite. *Aprostocetus* sp. (Lett.) *Cur. Sci.* **21** (7) 194-195, 1952.

2525. RAO, A. S., A gall midge (Itionidae : Diptera) pest of castor in India. (Lett.) *Cur. Sci.* **21** (12) 347-348, 1952.

2526. USMAN, S. & RAJU, R. N., Some new hosts and control of Lantana bug. (Lett.) *Cur. Sci.* **21** (10) 286-287, 1952.

632.9 PRECAUTION AGAINST DAMAGE. PROTECTION OF PLANTS
cf. also 603

2527. APPANNA, M., *Microbracon hebetor* Say : Possibilities of the mass production and large scale utilisation against insect pests of field crops. *Indian J. Entom.* **14** (3) 263-267, 1952.

2528. BAGCHEE, K., A review of work on Indian tree diseases and decay of timber and methods of control. *Indian Forestr.* **78** (11) 540-546, 1952.

2529. BASHA, M. G., Experiments on the control of the fruit borers of Jujube (*Ziziphus* spp.) *Carpomyia vesuviana* Costa and *Meridarchis scyrodes* Meyr in South India. *Indian J. Entom.* **14** (3) 229-238, 1952.

2530. BHAGWAGAR, P. R. & PATEL, M. K., Review of work on fungicides in India up to 1940. *Poona agric. coll. mag.* **43** (2) 46-60, 1952.

2531. DE JONG, PETER, The development of chemical methods of weed control. *Pltrs. Chron.* **47** (19) 512-514, 1952.

2532. GATTANI, M. L., Adaptation of fungi to fungicides and its significance in agriculture. *Indian Phytopath.* **4** (2) 174-180, 1951.

2533. GATTANI, M. L. & KAUL, T. N., Damping-off of tomato seedlings—its cause and control. *Indian Phytopath.* **4** (2) 156-161, 1951.

2534. GEE, E. P., What is the best means of control and destruction of flying foxes (*Pteropus giganteus* (Brunn)) ? (Misc. note). *J. Bombay natr. hist. Soc.* **51** (1) 268, 1952.

2535. IDNANI, M. A., Fly breeding in manure preparation and its control. *Indian Fmg. (N. S.)* **2** (9) 30-31, 1952.

2536. KHAN, NAWAB H., Control of Tabanid larvae. *Proc. nat. Acad. Sci. (India)* **21 B** (Pts. 1-5) 29-33, 1952.

3537. KUMAR, L. S. S. & SOLOMON, S., The role of synthetic hormones in combating weeds of the Bombay State. *Poona agric. coll. mag.* **43** (2) 61-69, 1952.

2538. MISRA, A. P., *Aspergillus flavus* Link, a parasite of the desert locust (*Schistocerca gregaria* Forsk.). (Lett.) *Cur. Sci.* **21** (8) 225, 1952.

2539. NARAYANAN, E. S., New chemical weapons for fighting insect menace. *Indian Fmg.* **2** (6) 14-15, 1952.

2540. NARAYANAN, E. S. & VENKATRAMAN, T. V., Technique of mass multiplication of *Stenobracon deesae* (Cam.) Hymenoptera : Braconidae for use against sugarcane and maize borers. *Proc. Indian Acad. Sci.* **36B** (1) 12-18, 1952.

2541. PATEL, G. A., Survey of hand operated spraying and dusting machines. *Poona agric. coll. mag.* **43** (3 & 4) 160-173, 1952-53.

2542. PATEL, G. A., ABC of BHC and DDT. *Poona agric. coll. mag.* **43** (2) 88-98, 1952.

2543. PATEL, G. A. & HADLI, S. N., Efficacy of certain new organic insecticides on nymphs of desert locust. (Lett.) *Sci. & Cult.* **18** (1) 42-43, 1952.

2544. PRUTHI, H. S. & BHATIA, D. R., Trial of aerial methods of control of the desert locust. (*Schistocerca gregaria* Forsk.) in India. *Indian J. Entom.* **14** (8) 243-256, 1952.

2545. PRUTHI, H. S. et al., Preliminary observations on Aldrin as anti-locust insecticide. *Indian J. Entom.* **14** (3) 273-296, 1952.

2546. SAPTHARISHI, K. & AZARIAH, M. D., Weed control by chemical trials with extra "A" (Sandoz). *Madras agric. J.* **39** (12) 621-622, 1952.

2547. SATYANARAYANA, P., The rate of loss of DDT. *Madras agric. J.* **39** (9) 471-477, 1952.

2548. SRINIVASAN, R. & CHACKO, P. I., The control of aquatic vegetation with 2,4-D. *J. Bombay natr. hist. Soc.* **51** (1) 164-169, 1952.

2549. SRIVASTAVA, A. S. & HULL, W. B., Effect of wind direction on the pea aphid control during dust application. (Lett.) *Sci. & Cult.* **18** (4) 191-192, 1952.

2550. SUNDARAM, S., Some new organic and systemic insecticides for the control of green bag of coffee. *Indian Coff.* **16** (7) 131-133, 1952.

2551. THOMAS, K. M. & NARASIMHASWAMY, R. L., Weed control in coffee plantations. *Pltrs. Chron.* **47** (22) 606-607, 1952.

2552. TREHAN, K. N., Locust and its control in the Punjab (India) during 1950 and 1951. *Punjab Farm.* **4** (3) 237-250, 1952.

2553. TREHAN, K. N., Improvised flame throwers used for locust control. *Punjab Farm.* **4** (1) 180, 1952.

2554. USMAN, S. & RAJU, R. N., Some local practices prevalent in the Mysore state in the control of insect pests. *Mysore agric. J.* **28** (4) 73-76, 1952.

2555. VASUDEVA, R. S., Sun as a means of controlling wheat smut. *Indian Fmg.* **2** (5) 26-27, 1952.

2556. Weed control. (editorial). *Sci. & Cult.* **18** (5) 203-206, 1952.

2557. Weed control in paddy, (departmental leaflet). *Trop. Agric.* **CVIII** (3) 196-199, 1952.

2558. Indian Phytopathological Society., Fourth Annual Report of the Indian Phytopathological Society, 1950. *Indian Phytopath.* **4** (2) 189-190, 1950.

633 CULTIVATION OF SPECIFIC CROPS

633.1 CEREALS

cf; also 993, 995, 1015, 1034

2559. ARIYANAYAGAM, D. V., Growth and development changes caused by presowing treatment of seed paddy. *Proc. Ceylon. Ass. Adv. Sci. (8th Annu. Sess.)* 15, 1952.

2560. CHANDRARATNA, M. F., FERNANDO, L. H. & WATTEGEDERA, C., Seed dormancy in rice. *Trop. Agric.* **CVIII** (4) 261-264, 1952.

2561. CHANDRASEKHARAN, P., The occurrence of barren tillers in a heterozygous rice. *Madras agric. J.* **39** (12) 605-610, 1952.

2562. CHATTERJI, U. N., Trials with Chinese varieties of paddy. *Indian Fmg.* **2** (7) 22-23, 1952.

2563. CHAVAN, V. M. & ARGIKAR, G. P., Cultivation and breeding of rice in South Gujarat. *Poona agric. coll. mag.* **43** (2) 79-85, 1952.

2564. CHAVAN, V. M., CHAUDHARI, B. B. & PATIL, J. A., Genetic improvement of irrigated wheats in Bombay Baxi 288-18 and Madhya 3-2. *Poona agric. coll. mag.* **43** (1) 3-6, 1952.

2565. DESAI, H. M., Hot weather bajri. *Indian Fmg.* **2** (8) 18-19, 1952.

2566. DIVAKARAN, K. & KRISHNA RAO, P., Reniform grain shape in Ragi—*Eleusine corocana* (Gaertn). *Madras agric. J.* **39** (10) 524-525, 1952.

2567. ESH, G. C. & BASU, U. P., The relation between the yield and the nutritive value of wheat. *Indian J. agric. Sci.* **22** (Pt. 3) 275-278, 1952.

2568. GHOSE, R. L. M. & BUTANY, W. T., Studies on the inheritance of some characters in rice (*Oryza sativa L.*). *Indian J. Genet. & Plt. Breed.* **12** (1) 25-30, 1952.

2569. GOPALACHARI, N. C., Phytohormones and nitrogen deficiency in paddy. *Madras agric. J.* **39** (8) 437-443, 1952.

2570. KOHLI, SATYA PRAKASH & PATKAR, M. B., Improved varieties of hill wheats. *Indian Fmg.* **2** (6) 26-27, 1952.

2571. KRISHNASWAMY, P., Storage and germination of millet seeds. *Madras agric. J.* **39** (9) 485-490, 1952.

2572. MITSUI, SHINGO, Rice production in Japan, *Madras agric. J.* **39** (8) 456-457, 1952.

2573. PAL, B. P., Some contributions to superior germplasm in wheat. *Indian J. Genet. & Plt. Breed.* **12** (1) 5-9, 1952.

2574. PATIL, J. A., Natural cross-pollination in *Rala* (*Setaria italica* Beauv.) *Poona agric. coll. mag.* **43** (3 & 4) 151-154, 1952-53.

2575. SARAN, A. B. & PRASAD, MANOJ, Ratooning of paddy (Lett.) *Cur. Sci.* **21** (8) 223-224, 1952.

2576. SATHE, VANAMALA, VENKITASUBRAMANIAN, T. A. & DE, S. S., Effect of fertilizers on the thiamine content of rice. (Lett.) *Sci. & Cult.* **18** (1) 33-34, 1952.

2577. SEN, S., Hints to the farmer: wheat and barley. *Indian Fmg.* **2** (5) 8-11, 1952.

2578. SINGH, BHOLA NATH, The relation of meteorological conditions to wheat production in Uttar Pradesh. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 35, 1952.

2579. SINGH, BHOLA NATH, Effects of soil types and locality on the production of wheat. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 46-47, 1952.

2580. SINGH, BHOLA NATH, Effects of forms of combined nitrogen rates and dates of dressings and irrigation on growth on yield of wheat and paddy *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 45, 1952.

2581. SINGH, BHOLA NATH, Effect of doses of phosphorus and calcium on germination, survival percentage and yield of wheat. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 44-45, 1952.

2582. SINGH, BHOLA NATH, Critical periods in the water requirements of wheat with or without added manures. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 43, 1952.

2583. SINGH, BHOLA NATH, Relative efficiency of methods of sowing and placement on germination, growth, development and outturn of wheat. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 39-40, 1952.

2584. SINGH, BHOLA NATH, Relation between seed rate and plant population and its effect on growth and yield of wheat. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 40, 1952.

2585. SINGH, BHOLA NATH, Effect of nitrogenous manures on germination, survival and yield of wheat. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 44, 1952.

2586. SINGH, BHOLA NATH, Effect of overcrowding root and shoot competition and spacing on growth of wheat. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 40-41, 1952.

2587. SINGH, BHOLA NATH, Effect of soil types on the requirement of irrigation for wheat in Uttar Pradesh. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 43-44, 1952.

2588. SINGH, SARUP & CHELA, KARTAR SINGH, Irrigation and sowing time for wheat under Jullundur conditions. *Punjab Farm.* 4 (4) 304-305, 1952.

2589. SRINIVASAN, V. & RAO, JAYA BHIMA, Progress of pulses and rice improvement work in Madras. *Madras agric. J.* 39 (9) 478-484, 1952.

2590. UTTAMAN, P, SAHADEVAN, P. C. & KELU-KUTTY MENON, M., Studies on the purity and performance of rice strain. *Madras agric. J.* 39 (11) 545-551, 1952.

2591. VERMA, R. D., Hints to the farmer : Maize, Jowar Bajra. *Indian Fmg.* 2 (4) 6-7, 1952.

633.2/3 FORAGE GRASSES, GREEN FODDER

2592. ACHARYA, C. N., Legumes and the soil. *Indian Fmg.* 2 (7) 12-13, 1952.

2593. ANKER-LADEFOGED, A. V., Cultivation of buckwheat on up-country patanas. *Trop. Agric.* CVIII (4) 269-270, 1952.

2594. DABADGHAO, P. M., Hints to the farmer : Rabi fodders. *Indian Fmg.* 2 (8) 8-9, 1952.

2595. DABADGHAO, P. M. & GANDHI, R. T., Grass-land research, I. Some promising grasses and legumes at the Indian Agricultural Research Institute, New Delhi. *Indian J. agric. Sci.* 22 (Pt. 3) 279-291, 1952.

2596. KAUSHIK, R. D., The cowpea (*Vigna sinensis*) a legume fodder for Northern India. *Allahabad Farm.* 26 (4) 127-134, 1952.

2597. KHAN, A. R., The miracle clover (Lett.) *Sci. & Cult.* 18 (3) 153-154, 1952.

2598. KUMAR, L. S. S., Breeding of forage plants. *Indian J. Genet. & Plt. Breed.* 12 (1) 1-4, 1952.

2599. MALIK, H. C., Cowpeas in the Punjab and its improvement. *Indian J. agric. Sci.* 21 (Pt. 1V) 347-356, 1951.

2600. OKE, J. G., Germination longevity and dormancy tests of the seeds of *Dichanthium annulatum* Stapf and *Botriochloa intermedia* (Br.) A. Camus. *Poona agric. coll. mag.* 43 (3 & 4) 155-159, 1952-53.

2601. PAUL, W. R. C., Notes on legumes. III. *Proc. Ceylon. Ass. Adv. Sci. (8th Annu. Sess.)* 11-12, 1952.

2602. PAUL, W. R. C., Grasses and legumes. *Trop. Agric.* **CVIII** (3) 191-193, 1952.

2603. PAUL, W. R. C., Promising legumes. (research note) *Trop. Agric.* **CVIII** (4) 271, 1952.

2604. SAPTHARISHI, K. & AZARIAH, M. D., Buckwheat (*Fagopyrum* species) A useful foodgrain and green manure crop Possibilities for extension on the Nilgiris. *Madras agric. J.* **39** (10) 523, 1952.

2605. SINGH, G. D., Note on cowpea cultivation. *Allahabad Farm.* **26** (4) 135, 1952.

633.4 ROOTS AND TUBERS
cf. also 894

2606. BEDI, KISHAN SINGH, Potato seed certification. *Punjab Farm.* **4** (1) 162-164, 1952.

2607. DESHMUKH, M. J., New potatoes for old. *Indian Fmg.* **2** (8) 6, 1952.

2608. DUTT, B. K. & GUHA THAKURTA, A., Utilization of freshly harvested potato tuber in the cultivation (as seed). *Trans. Bose Res. Inst.* **18**, 79-97, 1949-51.

2609. YUPTA, A. P., A note on the selection of seed potatoes. *Indian J. Hort.* **9** (3) 51, 1952.

2610. PUSHKARNATH & PATEL, J. S., Increasing potato yields in Bihar. *Indian Fmg.* **2** (4) 18-21, 1952.

2611. PUSHKARNATH, *Solanum jasminoides* Virus. (Lett.) *Curr. Sci.* **21** (9) 249, 1952.

2612. PUSHKARNATH, Seed potato development in Himachal. *Indian Fmg.* **2** (6) 22-25, 1952.

2613. PUSHKARNATH, DESHMUKH, M. J. & PAL, B. P., Improved potato varieties for the plains of India. *Indian J. Genet. & Plt. Breed.* **12** (1) 31-36, 1952.

2614. SINGH, BHOLA NATH, Effect of cut vs whole seed potato on its yield. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 47, 1952.

2615. SINGH, BHOLA NATH & BALYAN, BABU SINGH, Effect of seed size on potato production. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 47, 1952.

2616. SINGH, BHOLA NATH & BALYAN, BABU SINGH, Effect of calcium alone or in combination with phosphatic and farmyard manures on potato. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 48, 1952.

2617. SINGH, BHOLA NATH & SINGH, CHAUHARJA, Effect of nitrogen doses on tuberisation and yield of potato. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 48, 1952.

2618. SINGH, BHOLA NATH & SINGH, CHAUHARAJA, Effect of size of dressing of superphosphate on potato. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 48, 1952.

633.5 FIBRE PLANTS

COTTON

cf. also 891, 996, 2447

2619. BALASUBRAMANIAN, R. & KANNIYAN, K., Vegetative propagation of cotton. *Indian cott. grow. Rev.* **6** (4) 184-186, 1952.

2620. DASTUR, R. H. & GOPANI, D. D., The effect of spacing on the growth and yield of cotton in South Gujarat (Surat). *Indian J. agric. Res.* **22** (Pt. II) 113-137, 1952.

2621. JAGANNATHA RAO, C., RAGHAVAN, A. & APPA RAO, P., A review of recent progress in the work for the evolution of jassid and blackarm resistant strains of Combodia for the Tungabhadra project area. *Indian cott. grow. Rev.* **6** (3) 147-156, 1952.

2622. KANNIYAN, K. & BALASUBRAMANIAN, R., The interrelation of factors controlling yield and quality of irrigated Combodia cotton in Madras State. *Indian cott. grow. Rev.* **6** (3) 119-130, 1952.

2623. NAYAK, H. R., A note on the effect of cultural operations on the quality and agronomic characters of cotton. *Indian cott. grow. Rev.* **6** (3) 156-157, 1952.

2624. PATEL, G. B. & PATEL, G. T., Long staple cotton from hybrid seed of crosses between "Hirsutum" and "Barbadense" species. *Indian cott. grow. Rev.* **6** (4) 205-210, 1952.

2625. SANTHANAM, V., Heterosis effects in "Crinkled leaf" heterozygotes in *Gossypium arboreum* L. *Madras agric. J.* **39** (8) 444-447, 1952.

2626. SIKKA, S. M. & AZMAT SINGH, CH., Cotton extension work in Punjab. *Punjab Farm.* **4** (4) 288-292, 1952.

2627. SULOCHANA, C. B. (Miss), Soil conditions and root diseases. VII. Response of cotton plants to micro-element amendments and its relation to disease development. *Proc. Indian Acad. Sci.* **36 B** (6) 234-242, 1952.

AGAVE FLAX

cf. also 2429

2628. WAKANKAR, S. M., Fibres from ram-ban (Agaves). *Indian Fmg.* **2** (8) 16-17, 1952.

JUTE

2629. GHOSH, SANTJIBAN, Improved jute seed. *Jute Bull.* **15** (5) 208-209, 1952.

2630. INDIAN CENTRAL JUTE COMMITTEE, Annual Report of the Jute Agricultural Research Institute (1951-52). Calcutta, 1953. Pp 146.

2631. INDIAN CENTRAL JUTE COMMITTEE, Report on the marketing of jute and jute products (second report). Publicity Officer, Indian Central Jute Committee, 4, Hastings Street, Calcutta. Price Rs. 5/- 7Sh. 6d.

2632. KHAN, S. N., Jute cultivation by tribal people. *Jute Bull.* **15** (4) 170-172, 1952.

2633. MUKHERJI, M. C., Growing *capsularis* on *olitorius* tract. *Jute Bull.* **15** (4) 175-176, 1952.

633.6 SUGAR AND STARCH FURNISHING PLANTS

2634. CHOUDHRI, R. S. & SHARMA, S. N., The significance of bud polarity in the germination of sugarcane setts. *J. Sci. Res. Banaras Hindu Univ.* **II**, 200-204, 1951-52.

2635. KAUSHIK, R. D., Cultivation of sugar beets. *Punjab Farm.* **4** (3) 251-261, 1952.

2636. KHANNA, K. L., BANDYOPADHYAY, K. S. & PANDEY, J. P., Crop surveys in Bihar : III. Studies in the estimation of acre-yield of sugarcane during 1948-49, 1949-50. *Indian Sug.* **2** (4) 140-147, 1952.

2637. MUKERJI, B. K., Some important findings of the sugarcane rationing scheme at Kalai (Aligarh) Uttar Pradesh. *Indian J. agric. Sci.* **22** (Pt. 3) 267-270, 1952.

2638. NAIDU, G. V. B., Sugarcane cultivation in Shimoga district, *Mysore agric. J.* **28** (4) 55-72, 1952.

2639. RAHEJA, P. C., Sugarcane—hints to the farmer. *Indian Engg. (N. S.)* **2** (9) 8-11, 1952.

2640. RAHEJA, P. C., Analysis of sugarcane yields. III. Inter-relationship of varieties, nitrogen, phosphate and potash. *Indian J. agric. Sci.* **21** (Pt. IV) 313-324, 1951.

2641. RAHEJA, P. C., Analysis of sugarcane yield IV. Varieties and periods of planting and irrigation interval experiment. *Indian J. agric. Sci.* **21** (Pt. IV) 324-334, 1951.

AGRICULTURE

2642-2660

2642. RAHEJA, P. C. & SINGH, DABJIT, Growth studies in *Saccharum officinarum* IV. Tillering in relation to cane weight. *Indian J. agric. Res.* **22** (Pt. II) 139-149, 1952.

2643. SAMUELS, G., LANDRAU, P. & LUGO LOPEZ, M. A., Handling of sugarcane trash. *Indian Sug.* **2** (6) 215-219, 1952.

2644. SINGH, HARBANS, CHOPRA, JIWAN DASS & CHHABRA, HARBANS LAL, Losses in cane from field to factory. *Punjab Farm.* **4** (1) 176-177, 1952.

2645. SUGARCAKE BREEDING INSTITUTE, COIMBATORE, Annual Report of the sugarcane breeding Institute Coimbatore, for 1950-51. Publ : Ministry of Food & Agriculture, New Delhi. Pp. 57. Price Rs. 2/- 3 Sh.

2646. SUGARCAKE BREEDING INSTITUTE, COIMBATORE, Annual Report of the Sugarcane Breeding Institute, Coimbatore, for 1951-52. Pp. 129, Price Rs. 2/- 3 Sh.

STARCH FURNISHING PLANTS

2647. SWAMINATHAN, M. & MATHUR, P. B., Singhara (*Trapa bispinosa*). *Indian Fmg.* **2** (8) 20-21, 1952.

2648. UTTAMAN, P., A short note on the bud sprouts of tapioca setts. *Madras agric. J.* **39** (9) 468-470, 1955.

3 7 PLANTS PRODUCING STIMULANTS
TOBACCO

2649. BATRA, BALMUKAND, Time and method of planting *Desi* tobacco in the Punjab (India). *Punjab. Farm.* **4** (2) 226-227, 1952.

2650. KADAM, B. S., KHEMCHANDANI, H. T. & KRISHNAN, A. S., Effect of topping and spacing on the yield of chewing tobacco. *Indian Tobac.* **2** (3) 123-131, 1952.

2651. KADAM, B. S. & KRISHNAMURTY, T., Giant plants in Chatham. *Indian Tobac.* **2** (3) 118-120, 1952.

2652. RAMAKRISHNA REDDI, B., Exploratory trials of Virginia tobacco cultivation at Nandyal (Kurnool district.) *Madras agric. J.* **39** (7) 409-412, 1952.

2653. SAPTHARISHI, K. & AZARIAH, M. D., Use of "cut sets" and "whole seed" for planting tobacco. *Madras agric. J.* **39** (7) 412-419, 1952.

2654. Tobacco Bibliography. *Indian Tobac.* **2** (3) 141-143, 1952.

2655. INDIAN CENTRAL TOBACCO COMMITTEE. Seventh Annual Report of the Indian Central Tobacco Committee (1951-52). Pp 57.

TEA. COFFEE

2656. GHORI, GHOUSE KHAN, Coffee in Mysore. *Indian geogr. J.* **26** (1 & 2) 19-25, 1952.

2657. ILLANKOON, R. L., Tea small holdings advisory service. *Trop. Agric.* **CVIII** (3) 146-148, 1952.

2658. NATARAJAN, C. P. URS, KANTHARAJ, BAATIA, D. S. & ANANDASWAMY, B., Effect of metallic contamination on the quality of coffee. *Indian Coff.* **16** (6) 121-123, 1952.

2659. RANGACHARLU, V. S., Cacao or the chocolate tree. *Indian Fmg.* **2** (7) 18-19, 1952.

2660. RICHARDS, A. V., Progress of selection work on Cacao. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 14-15, 1952.

AGRICULTURE

633.8/9 VARIOUS CROPS FOR INDUSTRIAL PROCESSING

2661. SUBRAHMANYAN, V., Industrial crops as food during time of emergency. *Bull. cent. food techn. Res. Inst. Mysore* **2** (1) 7-9, 1952.

PERFUME SUPPLYING PLANTS

2662. KARDEL, HANS E., Lemongrass. *Indian Fmg. (N. S.)* **2** (9) 16-19, 1952.

NECTAR AND SPICES

2663. CHANDRASEKHARAN, S. N., A little known spice plant. *Zanthoxylum Rhetsa* DC. *Madras agric. J.* **39** (11) 563-564, 1952.

2664. SUBBIAH, M. S. & MAHADAVAN, V., *Gliricidia maculata* H. B. & K.—a good source of nectar. *Madras agric. J.* **39** (7) 419, 1952.

OIL CONTAINING PLANTS

2665. DESHPANDE, R. B., Wild safflower (*Carthamus oxyacantha* Bieb)—a possible oilseed crop for the desert and arid regions. *Indian J. Genet. & Plt. Breed.* **12** (1) 10-14, 1952.

2666. KUMAR, L. S. S. & GOKHALE, A. V., Natural cross pollination in *Sesamum Orientale* Linn in the Bombay-Deccan. *Poona agric. coll. mag.* **43** (2) 99-101, 1952.

2667. RAHEJA, P. C., Hints to the farmer: Oil-seeds. *Indian Fmg.* **2** (7) 8-9, 1952.

2668. SIKKA, S. M., K2—an improved variety of linseed for cultivation in the Kangra district. *Punjab Farm.* **4** (4) 290-295, 1952.

TANNING CONTAINING PLANTS

2669. EDWARDS, M. V., BADHWAR, R. L., & DEY, A. C., The vegetable tanning materials of India and Burma. *Indian For. Rec. (N. S.)* **1** (2) 1-191, 1952.

2670. RAJASEKHARA MUDALIAR, C. & SUNANDA KAMATH, H. (Miss), Distribution of *Rhizophora mucronata* Lam., in the "back water" of the west coast and its economic importance. *Madras agric. J.* **39** (12) 610-615, 1952.

MEDICINAL PLANTS

2671. BISWAS, K., Scientific comments. Note on the cultivation of medicinal plants in Bengal and Andaman Island by B. Gupta. *Indian Pharm.* **7** (10) 478-479, 1952.

2672. DASTUR, J. F., Medicinal plants of India and Pakistan. Pp. 317. Publ: D. B. Taraporewala Sons & Co. Ltd., 210, Hornby Road, Bombay, 1. Price Rs. 5/14/-.

2673. GOMATHINAYAGAM PILLAI, V., Preliminary studies on raising cardamom nurseries successfully. *Madras agric. J.* **39** (10) 513-518, 1952.

2674. GUPTA, M., *Artemisia* in Garhwal. *Indian Forestr.* **78** (8) 423, 1952.

2675. GUPTA MONORANJAN, Ipecacuanha—Its cultivation in India in the last decade. *Sci. & Cult.* **18** (3) 137-141, 1952.

2676. KAPOOR, L. D., HANDA, K. L. & CHOPRA, I. C., Cultivation of *Atropa acuminata* Royle ex Lindley. *J. sci. industr. Res.* **11A** (12) 534-537, 1952.

2677. NAIR, K. N. R., The cultivation of pyrethrum in the Nilgiris (South India). *Indian Forestr.* **78** (8) 384-399, 1952.

2678. VENKITAKRISHNA RAO, U., Betel chewing. *Month. Bull. Indian centr. arecanut. Comm.* **3** (3) 31-37, 1952.

RUBBER

2679. CONSTABLE, D. H., Some principles for manuring rubber in Ceylon. *Combd. 1st & 2nd Quart. Circ. for 1952. (Rub. Res. Inst.)* **28** (Pts. 1-2) 27-29, 1952.

2680. CONSTABLE, D. H., Testing of tree killing substances on *Hevea Brasiliensis* L. *Combd. 1st & 2nd Quart. Circ. for 1952. (Rub. Res. Inst.)* **28** (Pts. 1-2) 26, 1952.

2681. CONSTABLE, D. H., & de SILVA, C. A., Clonal yield maps for rubber in Ceylon. *Combl. 1st & 2nd Quart. Circ. for 1952. (Rub. Res. Inst.)* **28** (Pts. 1-2) 15-25, 1952.

2682. PIERIS, W. I., The small holdings department of the Rubber Research Institute of Ceylon. *Trop. Agric.* **CVIII** (3) 149-155, 1952.

BETEL (PAN)

2683. CHATTERJEE, B. N., The cultivation of Maghai pan at Gaya. *Allahabad Farm.* **26** (6) 219-222, 1952.

2684. MAHMUD, K. A., Betel (pan) cultivation in Madhya Pradesh. (Lett.) *Sci. & Cult.* **18** (1) 39, 1952.

634 FRUIT CULTIVATION

2685. SAMUEL SUNDARAJ, J., Survey of fruit growing in Madras State. *Madras agric. J.* **39** (12) 593-599, 1952.

POME FRUITS

2686. BAJWA, BAL SINGH, THAPAR, A. R. & CHADHA, T. R., Propagation by root grafting with special reference to apple in Kulu valley. *Punjab Farm.* **4** (3) 266-268, 1952.

2687. NARASINGA RAO, U., RANGACHARLU, V. S. & KUPPUSWAMY, B. S., Effect of linseed oil spray on the growth and yield of apple trees on the Nilgiris. *Indian J. Hort.* **9** (4) 59-63, 1952.

2688. NARASINGA RAO, U., RANGACHARLU, V. S., & KUPPUSWAMY, B. S. & KRISHNASWAMY, A. R., Vegetative propagation trials with the Persimmon (*Diospyros Kaki* Linn). *Indian J. Hort.* **9** (4) 1-6, 1952.

STONE FRUITS

2689. SAPTHARISHI, K. & AZARIAH, M. D., Offseason bearing in plums, and unusual phenomenon at the Agricultural Research Station at Nanjanad. *Madras agric. J.* **39** (8) 455, 1952.

CITRUS, FIGS

2690. BAJWA, BAL SINGH & JAWANDA, JAGJIT SINGH, Establishing citrus orchards in the Punjab. *Punjab Farm.* **4** (2) 196-202, 1952.

2691. BHATTACHARYA, S. C. & DUTTA, S., A preliminary observation on rootstocks for Citrus in Assam. *Indian J. Hort.* **9** (3) 1-11, 1952.

2692. BUELL, E. P., The Citrus Karna as a root stock for some Citrus species in the wet zone. (research note). *Trop. agric.* **CVIII** (3) 201, 1952.

2693. MUTHUSWAMY, S., VENKATESAN, C., & SRINIVASAN, C., Mandarin orange cultivation in the agency tract. *Madras agric. J.* **39** (11) 552-557, 1952.

2694. NAURIAL, J. P., Self-incompatibility in Pumelo (*Citrus maxima* (Merr). (Lett.) *Cur. Sci.* **21** (12) 347, 1952.

2695. RANGACHARLU, V. S. & SAMBASIVA RAO, I. K., 'Oleification' of fig and its effect on fruit maturity. (Lett.) *Sci. & Cult.* **18** (5) 244-245, 1952.

2696. RICHARDS, A. V., Viability of citrus seeds. *Trop. Agric.* **CVIII** (3) 186-188, 1952.

2697. RICHARDS, A. V., Citrus growing in Australia. *Trop. Agric.* **CVIII** (4) 246-259, 1952.

2698. SIDDAPPA, G. S., Quality standards for South Indian citrus fruits. *Indian J. Hort.* **9** (4) 7-24, 1952.

FLESHY FRUITS

2699. BAJPAI, P. N., Sterility in loquat. *Sci. Cult.* **18** (2) 83-89, 1952.

AGRICULTURE

2700-2719

2700. KHAN, K. FAZULLAH & KRISHNASWAMY, A. R., A note on the propagation of the tree tomato (*Cyphomandra betacea* Sendt) by stem cuttings. *Indian J. Hort.* **9** (3) 49, 1952.

2701. KHAN, K. FAZULLAH & SAMBASHIVA RAO, I. K., A note on the vegetative propagation of the Durain (*Durio zibethinus* L.) by inarching. *Indian J. Hort.* **9** (3) 50, 1952.

2702. KHAN, M. S., *Annona squamosa* Linn. *Indian Forstr.* **78** (9) 469-470, 1952.

2703. SINGH, MAHENDRA PRATAP, Mineral composition of fruits of the litchi (*Litchi chinensis* Sonn.) and loquat (*Eriobotrya japonica* Lindl.). *Indian J. Hort.* **9** (4) 53-58, 1952.

NUTS

2704. BAJWA, BAL SINGH & DUA KULWANT, Some useful products from groundnut. *Punjab Farm.* **4** (1) 165-166, 1952.

2705. NAMBIR, K. N., Areca nut cultivation in Coorg. *Month. Bull. Indian centr. arecanut Comm.* **2** (12) 141-143, 1952.

2706. NAMBIAR, K. K., Arecanuts in Assam. *Month. Bull. Indian centr. arecanut Comm.* **3** (5) 69-72, 1952.

PALM FRUITS ETC.

2707. CHEREYE, O. B. M., The planting and Advisory division of the Coconut Research Institute of Ceylon. *Trop. Agric.* **CVIII** (3) 156-161, 1952.

2708. GOPALAN, K., More coconuts. *Indian Fmg.* **2** (7) 20-21, 1952.

2709. GOPALAN, K., Development of coconut cultivation in West Bengal. *Indian cocon. J.* **6** (1) 35-40, 1952.

2710. SHANKAR RAO, M. BHAVANI & KOYAMU, K., Hybrid vigour in coconut seedlings. *Indian cocon. J.* **6** (1) 41-44, 1952.

2711. VERGHESE, E. J. & THOMAS, P. K., A copra kiln for small coconut plantations. *Indian cocon. J.* **6** (1) 19-29, 1952.

HERBACIOUS FRUITS BANANA

2712. BAJWA, BAL SINGH & JAWANDA, JAGJIT SINGH, Cultivation of papaya in the Punjab. *Punjab Farm.* **4** (2) 204-207, 1952.

2713. CHARAVANAPATAN, C., The tapping of Papaya for papain. *Trop. Agric.* **CVIII** (3) 189-190, 1952.

2714. DUTTA, S., Some bananas of Assam. *Indian J. Hort.* **9** (3) 26-35, 1952.

2715. KUMAR, VIRENDRA, Studies in *Carica papaya* Linn. III. Economics of papaya cultivation and fruit utilization with special reference to the production of papain. *Indian J. Hort.* **9** (3) 36-48, 1952.

2716. RICHARDS, A. V., Cultivation of pineapples. *Trop. Agric.* **CVIII** (4) 242-246, 1952.

VITICULTURE

2717. RANGACHARLU, V. S., Peculiarities of viticultural practices in Madurai district. (South India). *Madras agric. J.* **39** (11) 558-563, 1952.

2718. SINGH, L. B. & DIKSHIT, N. N., Studies in introducing earliness in maturity of grapes (*Vitis vinifera*, Linn) I. Effect of early pruning on the growth of vines and maturity of fruits. *Indian J. Hort.* **9** (3) 20-25, 1951.

2719. THAPAR, A. R. & BAJWA, BAL SINGH, Influence of time of pruning on growth, yield, fruit quality and time of ripening of Black Prince variety of grape. *Punjab Farm.* **4** (3) 269-274, 1952.

2720. VENKATARATNAM, L., MOHIBULLA FAROOQUI, M. & CHELLAPA, T., The Anab-e-Shahi grapevine and its culture in Hyderabad State. *Indian J. Hort.* 9 (3) 12-15, 1952.

634.9 FORESTRY

635.92 GENERALITIES, MEASUREMENTS ETC.

2721. INTER SERVICES STORES PRESERVATION ORGANIZATION, KANPUR, Timber thrift : care and preservation of timber in storage. *Stores Preservation Pamphlet No. 7*, 1952.

2722. KRISANASWAMY, V. S., A method to indicate the percentage of land which should be under forests. *Indian Forestr.* 78, (11) 537-539, 1952.

2723. KRISHNASWAMY, V. S., General formulae for measurement of heights of trees. *Indian Forestr.* 78 (7) 339-347, 1952.

2724. KRISHNASWAMY, V. S., Role of forestry in soil conservation planning. *J. soil water. conserv. India* 1 (1) 26-33, 1952.

2725. RUDRA, A. B., Von Mantel's formula and its modifications. (Lett.) *Indian Forestr.* 78 (8) 426-428, 1952.

2726. RUDRA, A. B., Von Mantel's formula and its modifications. (Lett.). *Indian Forestr.* 78 (10) 533-534, 1952.

2727. FOREST RESEARCH INSTITUTE, DEHRA DUN, Quinquennial programme of research of the Forest Research Institute, Dehra Dun, for 1948-53. Pp. 77. (Cyclostyled).

2728. Forest Research in India, 1948-49, Pt. I—The Forest Research Institute. Pp. 111. Available : Manager of Publications, Delhi. Price Rs. 8/6 ; 13Sh-6d.

2729. Forest Research in India, 1947-48, Pt. II.—Reports for Burma and Indian provinces. Pp. Price Rs 5/4. or 8Sh-3d.

2730. Forest Administration Report of Bombay State, 1950-51. Pp. 219. Available. Manager of Publications, Bombay.

FOREST ENGINEERING

2731. MASANI, N. J., Forest booms. *Indian Forestr.* 78 (10) 514-532, 1952.

FOREST BOTANY

2732. AUGIER, P. W., Private forests and private forest legislation. *Indian Forestr.* 78 (8) 400-408, 1952.

2733. GUPTA, M., Gregarious flowering of *Dendrocalamus strictus*. *Indian Forestr.* 78 (11) 547-550, 1952.

2734. HEWETSON, C. E., *Sal (Shorea robusta)* in South Bastar forest division, M. P. *Indian Forestr.* 78 (8) 409-410, 1952.

2735. JACOB, EBENEZER, *Casuarina equisetifolia*, *Madras J. agric.* 39 (10) 521-523, 1952.

2736. KADAMBI, K., On the occurrence of *Bambusa polymorpha* Munro in Bori valley, Hoshangabad division, Madhya Pradesh. *Indian Forestr.* 78 (10) 506-508, 1952.

2737. SZECHOWYCZ, R. W., Forests in the catchment area of the Gal Oya reservoir. *Proc. Ceylon Ass. Adv. Sci. (8th Annu. Sess.)* 10-11, 1952.

FORESTRY METHODS

2738. JACOB, M. C., Regeneration of the *Bonsum Amari* forests of Assam. *Indian Forestr.* 78 (12) 602-608, 1952.

1921. KALYANASUNDARAM, The present state of our knowledge of epilepsy (mode of origin, diagnosis and treatment). *Antisep.* **49** (11) 866-869, 1952.

1922. KANE, B. G., A typical case of pneumococcal meningitis. *Indian med. Gaz.* **87** (11) 524-525, 1952.

1923. KONAR, N. R. & SEN GUPTA, A. N., Pneumococcal meningitis with multiple cranial nerve lesions. *Indian med. Gaz.* **87** (11) 495-499, 1952.

1924. KRISHNAN, M. K. R., Facial palsy during an attack of mumps. *J. Indian med. Ass.* **21** (11) 484, 1952.

1925. MENON, A. N. K., Sturge—Weber syndrome (case note). *Indian J. Rad.* **6** (3) 92-93, 1952.

1926. MUKHERJEE, B. B., Acute ascending paralysis. *J. Indian med. Ass.* **21** (11) 480-481, 1952.

1927. NANDI, A. K., Myelitis following arsenic therapy in pulmonary eosinophilia. *Antisep.* **49** (12) 922-924, 1952.

1928. ROHTAGI, J. N., Ocular headache. *Patna J. Med.* **26** (4) 162-167, 1952.

1929. SATYANARAYANAMURTHI, G. V. A clinical study of a few cases of paraplegia. *Indian J. med. Sci.* **6** (8) 492-503, 1952.

1930. SHAH, M. J. & VAKIL, B. J., Streptomycin in tuberculous meningitis. *Indian J. med. Sci.* **6** (7) 394-412, 1952.

1931. VAHIA, N. S. & KOTHARI, N. J., Medical treatment of epilepsy. *Indian J. med. Sci.* **6** (9) 609-620, 1952. *Indian Physn.* **11** (10) 223-226, 1952.

616.89 PSYCHIATRY

1932. ANON, Circular manic depressive. *Indian J. neur. psych.* **3** (3) 294-306, 1952.

1933. BHAGWAT, G. A., Psychiatry in India. *Indian J. neur. psych.* **3** (3) 215-226, 1952.

1934. BHASKARAM, K., Phenyl pyruvic oligophrenia: short review with the report of an affected family. *Indian med. Gaz.* **87** (11) 506-511, 1952.

1935. GANGULI, D. N., Pavlov's influence on psychiatry. *Indian J. neur. psych.* **3** (3) 232-246, 1952.

1936. HASIB, S. A., Psychiatry in general practice. *Indian J. neur. psych.* **3** (3) 288-293, 1952.

1937. NANDI, D. N., Thymol-turbidity test in schizophrenia. *Indian J. med. Res.* **40** (3) 295-302, 1952.

1938. NANDI, DHIREDRA NATH, MALLIK, TAPAN BASU & BOSE, SAMIR, Importance of age of onset and sex in the aetiology of psychoses. *Indian J. Psych.* **27** (1-IV) 131-142, 1952.

1939. NARAYANAN, P. P., Aural stigmata in mental disorders. *Indian J. neur. psych.* **3** (3) 247-252, 1952.

1940. PAY, P. K., The use of *Rauvolfia serpentina* in psychiatry. *Indian J. neur. psych.* **3** (4) 380-398, 1952.

1941. SINGH, KIRPAL, Referred to a psychiatrist. *J. Army med. corps. India.* **8** (4) 217-219, 1952.

1942. SINGH, KRIPAL, A case of prolonged amnesia. *Indian J. neur. & psych.* **3** (4) 365-374, 1952.

1943. VARMA, L. P., General paresis. II. Its diagnosis and cure. *Indian J. neur. psycht.* **3** (3) 259-287, 1952.

1944. VARMA, L. P., General paresis. III. Its prognosis. *Indian J. Neur. & Psycht.* **3** (4) 345-364, 1952.

616.9 GENERAL AND INFECTIOUS DISEASES

SMALL POX

1945. GHOSH, MONOMOHAN & SINHA, H. S., Survey of small pox cases. *Calcutta med. Rev.* **19** (4) 85-93, 1952.

1946. ROY, H. K., Problem of small pox in India. *Calcutta med. Rev.* **19** (4) 94-96, 1952.

INFLUENZA

1947. SEN, PABESH CHANDRA, A case of influenzaeal meningitis. *Patna J. med.* **26** (3) 139-140, 1952.

1948. SEN, BHUPAL KANTI, A severe case of influenza with toxic manifestations. *Antisep.* **49** (11) 883-884, 1952.

TYPHUS

1949. KALRA, S. L., Natural history of typhus fevers in India. *Indian J. med. Sci.* **6** (9) 569-575, 1952.

TYPHOID

1950. BHATIA, B. B. & BHARGAVA, R. K., Chloromycetin in enteric fever. *J. Indian med. Ass.* **21** (10) 425-427, 1952.

1951. GOUR, K. N., A clinical study of 383 cases of typhoid fever at the S. N. Hospital, Agra. *Agra Univ. J. Res. (Sci.)* **1**, 189-204, 1952.

1952. ROY, H. K. & DAS, A., Terramycin in enteric fevers. *Calcutta med. J.* **49** (10) 389-392, 1952.

1953. SUBRAHMANYAN, P., The action of chloromycetin on the production of antibodies in typhoid fever. *J. Indian med. Ass.* **22** (3) 99-101, 1952.

DIPHTHERIA

1954. ABEYRATNE, L. O. & ATUKORALE, A case of diphtheria with complete heart block. *J. child hosp. Colombo.* **2** (1) 26, 1952.

CHOLERA

cf. also 1595

1955. CHAUDHURI, R. N., GHOSAL, S. C., MONDAL, A. & CHAKRAVARTY, N. K., Treatment of cholera with oral and intravenous chloromycetin. *Indian med. Gaz.* **87** (10) 455-459, 1952.

1956. SEN, P., Cholera and its treatment. *Calcutta med. Rev.* **19** (3) 57-69, 1952.

DIARRHOEA

1957. SRIPATHI RAU, U., Acute diarrhoea and dehydration in infants. *Antisep.* **49** (11) 851-860, 1952.

MALARIA

cf. also 140, 1481, 1484, 1486, malaria control

1958. GUPTA, P. N., The malaria menace and how to avert it. *Antisep.* **49** (9) 703-716, 1952.

1959. JACOB, V. P., SINGH, PRITAM & GRACIAS, R., Malaria in Kharakvasala. *J. Army med. Corps. India* **8** (3) 135-143, 1952.

1960. KANE, B. G., Cerebral malaria due to paludrine resistant strains of parasites. A case report. *Indian med. Gaz.* **87** (7) 303-304, 1952.

1961. SACHDEO, K. N., Modern treatment of malaria. *Antisep.* **49** (8) 606-612, 1952.

TETANUS

1962. KHOSLA, H. L. & BHATT, A. N., A study of tetanus in the Medical College hospital, Nagpur. *J. Indian med. Ass.* **22** (2) 52-53, 1952.

YAWS

1963. RAMANARAO, P. V., Studies in yaws (Koya Rogam). A review of 1000 cases of yaws from Warangal district, Hyderabad Dn. *Indian med. Gaz.* **87** (10) 437-444, 1952.

MEDICAL SCIENCES

AMOEBIASIS

1964. BHATTACHARYEE, B. & SIRCAR, PURNIMA, A case of amoebic perforation of the colon. *Indian med. Gaz.* **87** (11) 511-512, 1952.

KALA AZAR

1966. PURANDARE, N. M., BHENDE, Y. M., FIGUEREDO, N. & DESAI, S. D., Another outbreak of Kala-azar in the Aeworth Leper Lane. *Indian J. med. Sci.* **6** (11) 787-791, 1952.

1967. SEN GUPTA, P. C. & ADHIKARI, S. L., Observations on the complement fixation test for Kala-azar. *J. Indian med. Ass.* **22** (3) 89-93, 1952.

1968. SENGUPTA, P. C. & BHATTACHARYYA, B., Treatment of Indian Kala-azar with a new antimony compound. Nu-1160. *Indian med. Gaz.* **87** (10) 460, 1952.

RABIES

1969. D' SILVA, C. B., Studies on Rabies. VIII. Observations on recovery from rabies, prolonged illness in rabies and neuro-sterilization. *Indian J. med. Res.* **40** (3) 317-325, 1952.

MISCELLANEOUS

1970. PANJA, D. & GHOSH, S., Scabies in goats and rabbits communicable to man. *Indian med. Gaz.* **87** (10) 449-450, 1952.

1971. PURKAYASTHA, B., A case report of monkey bite. *Indian med. Gaz.* **87** (7) 306, 1952.

1972. RAO, K. N. A., Brucellosis in Kashmir Valley. *J. Army med. Corps India* **8** (4) 215-216, 1952.

1973. SINGH, SATYA NARAYAN & RAO, RAM-CHANDER, An interesting case of human infection with Physaloptera from Hyderabad. *Dn. Proc. 39th Indian Sci. Congr.* Pt. IV (Abstr.) 34, 1952.

VENEREAL DISEASES

1974. JUNGALWALLA, N., A note on venereal diseases. *Indian J. Ven. Dis. & Derm.* **18** (3) 90-102, 1952.

1975. SIRKER MAFIZUDDIN, In the land of latent venereal diseases. *Indian J. Ven. Dis. & Derm.* **18** (3) 88, 1952.

617 SURGERY

1976. BASU, A. K., Recent advances in cardiac surgery. A review. *Indian med. Gaz.* **87** (8) 362-365, 1952.

1977. BASU, A. K., Secondary epiphyseal changes about the knee joint in tuberculosis of the hip. *Indian J. Surg.* **14** (4) 304-314, 1952.

1978. BASU, A. K. & NIXOGI, S. K., Use of absolute alcohol in post-operative cases by intravenous route. *Calcutta med. J.* **49** (8) 303-305, 1952.

1979. BERGSMA, STUART, Emergencies in genito-urinary surgery. *J. Christ. med. Ass. India* etc. **27** (5) 246-252, 1952.

1980. BETTS, REEVE H., Surgery of certain oesophageal lesions. *Indian med. Gaz.* **87** (8) 337-347, 1952.

1981. BORGES, E. J., Esophageal resection for cancer. *Indian J. med. sci.* **6** (7) 387-393, 1952.

1982. CHAKRAVARTI, DWIJENDRA NATH, A rare variety of surgical emphysema. *Indian med. Gaz.* **87** (9) 498, 1952.

1983. COOPER, R. N., Preoperative internal splinting for neglected cases of the prolapsed rectum. *Indian J. Surg.* **14** (4) 335-336, 1952.

1984. DESA, A. E., Hydrocephalus. (A study of 80 cases) *Indian J. Surg.* **14** (3) 201-210, 1952.

1985. DESA, ARTHUR E., Surgical aspect of gall bladder diseases. *Indian J. Rad.* **6** (3) 83-86, 1952.

1986. FRIEDMANN, MARTIN, An earring in the oesophagus. *Antisep.* **49** (11) 875-877, 1952.

1987. GREWAL, K. S., A short history of the evolution of orthopaedic surgery. *Indian J. Surg.* **14** (4) 346-349, 1952.

1988. HUGHES, ARTHUR, Methods of reducing time loss and disability in emergency surgical treatment. *J. Christ. med. Ass. India etc.* **27** (4) 198-270, 1952.

1989. HUSFELDT, E., Surgery of the congenital malformations of the heart and the great vessels. *Indian Heart J.* **4** (2) 57-64, 1952.

1990. KANAKARAJ, J. D., Lepra-surgery. *Antisep.* **49** (8) 599-604, 1952.

1991. LAL, SANGHAM, New operation for peptic ulcer (Aylett). *Indian J. Surg.* **14** (3) 211-214, 1952.

1992. MITSUDA, K., Thirtyfive years of Vasectomy. *Lepr. India* **24** (3) 126-129, 1952.

1993. MUKHOPADHAYA, B., Intramedullary pinning of long bones. *Indian J. Surg.* **14** (4) 279-294, 1952.

1994. PHELPS, KENNETH A., Minimizing the dangerous complications of tonsillectomy and adenoidectomy in children. *Calcutta med. Rev.* **19** (7) 157-164, 1952.

1995. RAMAMURTHI, B., Chronic spinal extradural inflammation. *Indian J. Surg.* **14** (4) 354-356, 1952.

1996. SAHA, A. K. & SEN, SUKOMAL. Fracture of the neck of the femur. A new method of fixation by angulated biflanged bone-grafting. *Calcutta med. J.* **49** (11) 426-429, 1952.

1997. SARKAR, H. K., A case of early Volkmann's Ischaemia following posterior dislocation of elbow treated successfully by arterectomy. *Indian J. Surg.* **14** (4) 350-353, 1952.

1998. SEN, AMOR, Pathology of rib fracture—Its treatment by intercostal block and rib suture. *Indian J. Surg.* **14** (3) 215-219, 1952.

1999. SINGH, JAGADISH, A case of strangulated inguinal hernia in a patient aged 107 years treated successfully by operation. *Indian med. Gaz.* **87** (12) 579, 1952.

2000. SWAMIDASAN, GRACE, Pancreatic heterotopia. *Indian J. Surg.* **14** (3) 261-264, 1952.

2001. THOREK, PHILIP, Recent trends in esophageal surgery. *Calcutta med. Rev.* **19** (5) 109-116, 1952. **19** (6) 133-136, 1952.

2002. TUNNELL, N., Some thoughts on hare-lip and cleft-plate surgery. *J. Christ. med. Ass. India etc.* **27** (6) 302-310, 1952.

2003. UPADHYAY, S. N. & MITRA, SUKUMAR, Abdominal hysterectomy in some gynaecological conditions. *Indian med. Gaz.* **87** (9) 391-399, 1952.

2004. UDUPA, K. N., Tuberculous pericarditis and its surgical management. *Indian J. Surg.* **14** (4) 315-328, 1952.

2005. UDUPA, K. N., Duodenal diverticulum (with a case report of massive haematemesis and malaena). *Indian J. Surg.* **14** (3) 229-235, 1952.

2006. Thoracic surgery (editorial). *Indian med. Gaz.* **87** (8) 361-362, 1952.

617.7 OPHTHALMOLOGY

2007. AGARWAL, K. N. Sun as an aid to vision or (eyesight). *Patna J. Medic.* **26** (4) 174-176, 1952.

MEDICAL SCIENCES

2008. AGARWAL, LALIT P. & ADHAULLA, H. N., Anophthalmos. A case report. *Indian med. Gaz.* **87** (8) 358, 1952.

2009. AGARWAL R. C., Neuroparalytic keratitis. *J. Indian med. Ass.* **22** (2) 76, 1952.

2010. BASU, P. K., Optico-ciliary neurectomy in absolute glaucoma. *Calcutta med. J.* **49** (11) 430-431, 1952.

2011. BOSE, J., A few observations on some hereditary ocular diseases. *Calcutta med. J.* **49** (8) 306-310, 1952.

2012. BOSE, JYOTIRMOY, A few observations on eye strain. *Calcutta med. J.* **49** (12) 483-490, 1952.

2013. COOPER, S. N. & DOCTOR, Y. A., Keratometry study in refractive conditions of the eye particularly with reference to myopia. *Indian Physn.* **11** (7) 141-156, 1952.

2014. KHANNA, V. N., Prevention of blindness. *Antisep.* **49** (12) 943-950, 1952.

2015. MUSTAPI, PROMODE CHANDBA, Commonest eye affection in and around Jameshpur during the monsoons and the months immediately following. *Patna J. Med.* **26** (3) 130-132, 1952.

2016. ROY, S. C., A case of Iritis after B. C. G. Vaccination. *Antisep.* **49** (10) 801-802, 1952.

2017. SINGH, SANTOSH., Toxoplasmosis in India. *Indian Physn.* **11** (10) 209-220, 1952.

2018. SRINIVASAN, N., Role of an ophthalmologist in industry. *J. Indian med. Ass.* **22** (1) 21-26, 1952.

2019. SRIVASTAVA, B. P., Observations on treatment of glaucoma. *Patna J. Med.* **26** (4) 169-173, 1952.

2020. VON FESUS, ANDREW, Cornea grafting on keratomalacious eyes. *Proc. Ceylon Ass. Adv. Sci. (8th Ann. Sess.)* 1-2, 1952.

618 GYNAECOLOGY. OBSTETRICS

2021. LAZABUS, H. M., Total versus subtotal abdominal hysterectomy for benign conditions of the uterus. *J. Christ. med. Ass. India etc.* **27** (4) 193-197, 1952.

2022. MUKHERJEE, CHUNILAL, Studies on vesical changes in the genital prolapse in the female. *Indian J. Surg.* **14** (3) 220-228, 1952.

2023. MUKHERJEE, CHUNILAL., Studies on carbohydrate metabolism in toxæmia of pregnancy. 4. Acidosis and Ketosis. *J. Indian med. Ass.* **21** (10) 411-416, 1952.

2024. GHOSH, T. K., A rational approach to the management of cancer cervix cases. *Indian J. Rad.* **6** (3) 87-89, 1952.

2025. KHANOLKAR, V. R., Some aspects of pathology of cervix uteri. *Indian J. Rad.* **6** (4) 108-112, 1952.

2026. MOSES, C., A case of cancer of cervix complicating pregnancy. *Antisep.* **49** (8) 637-639, 1952.

2027. MODY, K. P., Treatment of cancer of the cervix. *Indian J. Rad.* **6** (4) 120-122, 1952.

2028. PETERS, HANNA., The vaginal smear. *J. Obst. & Gynaec. India* **3** (2) 69-75, 1952.

2029. ROY, SUBODH K. SUR., Vesicovaginal fistula with special reference to those complicated with rectovaginal fistula or complete perineal tear. *J. Indian med. Ass.* **21** (12) 499-506, 1952.

2030. SCHAUFLER, GOODRICH., Pelvic mechanics and commonsense pelvimetry. Pts. I, II. *J. Obst. & Gynaec.* **13** (7) 133-145, 1952 ; **13** (8) 153-161, 1952.

2031. VAZE, VASUNDHARA., A case of chorionic epithelioma. *J. Obst. & Gynaec. India* **3** (2) 97-106, 1952.

OBSTETRICS

2032. ABDULLA, M. & ROHINI, D. K., (Miss) A simple and reliable treatment of Hyperemesis gravidarum. *Indian med. Gaz.* **87** (8) 347-350, 1952.

2033. BHASKAR RAO, K., Physiology and management of normal third stage of labour. *J. Obst. & Gynaec. India* **3** (2) 81-87, 1952.

2034. DESA, H., Some observations on the difficulties of extraction of the child in lower segment Cesarian section. *J. Obst. & Gynaec. India* **3** (2) 63-68, 1952.

2035. GHOSH, NAGEN., Oedema in obstetric practice. *J. Indian med. Ass.* **21** (11) 472-474, 1952.

2036. KHOSLA, H. L. & BHATT, A. N., Chloromyctin in puerperal sepsis. A case report. *Indian med. Gaz.* **87** (7) 304-305, 1952.

2037. KOTHARI, B. V. & BHENDE, Y. M., Nutritional megaloblastic anaemia of pregnancy. A study of 109 cases. *Indian J. med. Res.* **40** (3) 387-429, 1952.

2038. KRISHNA MENON, M. K., An unusual type of rupture of the uterus. *J. Obst. & Gynaec. India* **3** (1) 24-28, 1952.

2039. KRISHNA MENON, M. K., Accidental haemorrhage and eclamptogenic toxæmia. *J. Obst. & Gynaec. India* **3** (1) 1-5, 1952.

2040. KRISHNAN, R. G., Contraction ring dystocia with sclerema of the infant. *J. Obst. & Gynaec. India* **3** (1) 29-30, 1952.

2041. MALKANI, PARVATI K., Bilateral extra-uterine pregnancy. *J. Obst. & Gynaec. India* **13** (8) 162-164, 1952.

2042. MALKANI, PARVATI, K., (Miss) Full term broad ligament pregnancy. *Antisep* **49** (10) 799-800, 1952.

2043. PURANDARE, N. A., Perineal measurements at the time of delivery of the head, perineal tear and its prophylactic measures. *J. Obst. & Gynaec. India* **3** (2) 45-62, 1952.

2044. RAJ, PADMA, A review of our present knowledge of etiology of pre-eclampsia syndrome. *J. Obst. & Gynaec. India* **3** (2) 88-96, 1952.

2045. ROSEVARE, RUTH, A case report—Caesarian section. *J. Christ med. Ass. India. etc.* **27** (5) 262-263, 1952.

2046. SATUR, D. M. & KUMAR, DHIRENDRA., Torsion of the pregnant uterus. *J. Obst. & Gynaec. India* **3** (2) 76-80, 1952.

2047. SCHAUFFLER, GOODRICH C., Ectopic pregnancy—Recent concepts and a clinical review. *J. Obst. & Gynaec.* **13** (9) 171-180, 1952.

2048. SETH, S., A case of secondary anuria after child birth. *J. Obst. & Gynaec.* **13** (12) 235-238, 1952.

2049. SHEVADE, C. V., A case of primary abdominal pregnancy. *Antisep.* **49** (8) 640-644, 1952.

2050. Premature birth and retroental fibroplasia (editorial). *J. Indian med. Ass.* **22** (1) 29-31, 1952.

2051. Sudden death in childbirth (editorial). *J. Indian med. Ass.* **22** (2) 77-78, 1952.

619 VETERINARY SCIENCE

2052. KRISHNA RAO, N. S. & KRISHNAMURTHI, H. V., Note on Bhaduris test for pregnancy in farm animals. (Lett.) *Cur. Sci.* **21** (7) 196-197, 1952.

MEDICAL SCIENCES

2053. SASTRY, GANTI A., Immunisation against some of the common virus diseases of animals. *Madras Vet. Coll. Annu.* XI, 24-29, 1952.

HORSES

2054. INNES, J. R. M., Cerebro-spinal nematodiasis. A nervous disease of animals caused by immature nematodes (*Setaria digitata*) and its relationship to Kumri of horses in Indi. *Indian Vet. J.* **29** (2) 81-86, 1952.

CATTLE AND OTHER LARGE RUMINANTS

2055. DATTA, S., Chronic bovine haematuria. *Indian Vet. J.* **29** (3) 187-209, 1952.

2056. BASU, B. C., SEN GUPTA, C. M. & BALARAMA MENON, P., Reduction in milk yield in Indian dairy cattle by arthropod invasion and its control. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. I) 51-59, 1952.

2057. DHILLON, H. S., A latent case of bovine surra at Mukteswar diagnosed by Ray's M. B. 744 test (chemical article). *Indian Vet. J.* **29** (3) 242-243, 1952.

2058. GHALIGI, S. B., Acetonemia or Ketosis in bovines (clinical article). *Indian Vet. J.* **29** (2) 130-132, 1952.

2059. JAGANNADHAN, V., Median neurectomy in a case of unilateral osteo-periostitis of the os pedis. *Madras Vet. Coll. Annu.* XI, 49-50, 1952-53.

2060. MARATHE, M. R., A safer and more convenient site for intravenous injection in cattle and buffaloes. (clinical article). *Indian Vet. J.* **29** (2) 135-136, 1952.

2061. MATHUR, A. C., Foot and mouth disease in Indian cattle. *Indian Fmg.* **2** (5) 18-19, 1952.

2062. NABAYANA RAO, K., Tetanus in a bull calf. (clinical article) *Indian Vet. J.* **29** (3) 251-252, 1952.

2063. PAL, DHARAM, Effects of summer on temperatures of buffalo calves. *Indian Vet. J.* **29** (3) 210-222, 1952.

2064. RAJAGOPAL RAO, R., "Sulphamexathine" treatment of bovine rinderpest. (clinical article). *Indian Vet. J.* **29** (3) 249-251, 1952.

2065. RAM, TULSA, Geographical distribution and seasonal incidence of main contagious diseases among bovines in the Punjab from 1944-45 to 1949-50. *Indian J. Vet. Sci. & Anim. Husbd.* **22** (Pt. II) 135-142, 1952.

2066. RAMANUJACHARI, G. & ALWAR, V. S., *The-lazia bubalis* n. sp from an Indian buffalo. *Indian Vet. J.* **29** (2) 97-100, 1952.

SMALL RUMINANTS

2067. GONZAGA, ARCADIO & VILLAYER, OZZIAS J., Studies on the effect of stilbestrol on the stimulation of lactation in virgin and in dry native goats. *Indian Vet. J.* **29** (2) 87-96, 1952.

2068. LALL, H. K., A case of congenital goitre in kids. (clinical article) *Indian Vet. J.* **29** (2) 133-135, 1952.

POULTRY

2069. NADGIR, S. R. & DIXIT, S. G., Chick embryo vaccine against Ranikhet or Newcastle's disease and village poultry. *Indian Poult. Gaz.* **36** (3) 12-13, 1952.

DOGS

2070. ANTIA, F. P., The effect of vagotomy on the gastric function in the dog. *Indian Physn.* **11** (8) 178-180, 1952.

2071. CHANBASEKARIAH, P., A case of report of canine oesophageal spirocerosis. *Madras Vet. Coll. Annu.* XI, 43-45, 1952-53.

2072. HEGDE, V. R., Oesophageal dilatation with intussusception of stomach in a pup. *Madras Vet. Coll. Annu.* XI, 40-41, 1952.

2073. KESHAVA MURTHY, B. S. BAL, therapy in an obstinate case of eczema in a dog. *Madras Vet. Coll. Annu.* XI, 46-48, 1952-53.

2074. PURUSHOTHAM RAO, B. S. & KISHEN RAO, M., Aureomycin in canine practice (chemical article). *Indian Vet. J.* **29** (3) 252-255, 1952.

2075. RAMA RAO, T., Surra in dogs. (clinical article) *Indian Vet. J.* **29** (3) 247-249, 1952.

2076. SINGH, G. B., Perineotomy for the surgical removal of venereal granuloma of bitches (clinical article). *Indian Vet. J.* **29** (2) 126-129, 1952.

2077. VAIDYANATHAN, S. N., Spirocera lupi infection in dogs. A few cases treated with Hetrazan (Lederle). *Indian Vet. J.* **29** (3) 244-247, 1952.

CATS

2078. RAMMOHAN RAO, S. & HIBEGAUDEER, L. S., Coccidiosis in cats and dogs in Bombay. *Indian Vet. J.* **29** (2) 109-112, 1952.

62 ENGINEERING

2079. JOSHI, N. S., Some misconceptions about Hindi scientific terminology. *J. Instn. Engrs. (India)* **33** (1) 93-100, 1952.

2080. RADHAKRISHNAN, R., Extracts from current technical literature. *Telecom.* **2** (2) 132-142, 1952.

2081. SANWAL, K. D., The respective roles of civil and mechanical engineers in tubewell irrigation schemes. *Irrig. & Powr. J.* **9** (2) 289-293, 1952.

2082. WILLIAMS, H., Some engineering problems. *Def. Sci. J.* **2** (2 & 3) 95-97, 1952.

2083. Scientific terminology-Certain misconceptions. (Hindi supplement). *J. Instn. Engrs. (India)* **32** (4) 2-11, 1952.

621.0/09 MACHINERY AND APPARATUS

2084. GHOSH, C. S. & VENKATA RAO, The primitive machine of Kron. *J. Indian Inst. Sci.* **34B** (4) 123-139, 1952.

2085. TISCHNER, H., A criterion of stability in Servo-mechanism system. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr.) 5-11, 1952.

62.1 STEAM ENGINES. BOILERS

2086. CHAMBERS, H., The deaeration of boiler feed water. *Indian & East. Engr.* **CXI** (2) 255-259, 1952.

2087. NEWBOULT, H. G., Economical working of small boiler plants. *Chem. Age. Ser.* **6**, 61-63, 1952.

2088. RAJU, C. S. N., The indirect method forecasting cooling water temperatures for designs of condensing steam turbines. *Powr. Engr.* **2** (4) 194-197, 1952.

621.3 ELECTRICAL ENGINEERING

cf. also 110

2089. CLARKE, K. K., Note on a method of transient analysis. *J. Madras Inst. Techn.* **1** (1) 96-104, 1952.

2090. DALZIEL, CHARLES F., DRIPPS, WILLIAM F. & KRESGE, JAMES S., Short circuit analysis for mid-tap circuits supplied from Delta connected power transformers — *Powr. Engr.* **2** (4) 171-178, 1952.

WATER, DRINKING AND INDUSTRIAL WATER

664.1/2 CARBOHYDRATE INDUSTRY

2894. BAJPAI, R. K., Dry ice, a useful refrigerant. *Chem. Age Ser.* **6**, 65-67, 1952.

2895. PURI, R. P., Treatment of boiler feed water. *J. sci. industr. Res.* **11A** (9) 383-387, 1952.

2896. WILBUSHEWICH, EUGEN, Rapid ice—its production and characteristic qualities. *J. Indian Soc. Refrig. Engrs.* **3** (2) 50-54, 1952.

MIXED BEVERAGES

2897. AYAN DUTT, J. M., Fruit juice. *Indian Food Pack.* **6** (7) 13-16, 1952.

COFFEE, TOBACCO

2898. GEDEON, J., Vitamin B from Indian tobacco waste. *Indian Tobac.* **2** (3) 115-117, 1952.

2899. NATARAJAN, C. P., BHATIA, D. S., SUBRAMANYAN, V., Studies on the utilization of coffee husk. *J. sci. industr. Res.* **11A** (9) 410-411, 1952.

2900. PRASAD, JAGDAMBA, A short note on the beedi leaf industry. *Indian Tobac.* **2** (3) 132-139, 1952.

664 PREPARATION AND PRESERVATION OF SOLID FOODSTUFFS

cf. also 698, 948

2901. ANAND, J. C., Cannery waste and its disposal. *Indian Food Pack.* **6** (7) 17-20, 1952.

2902. BOSE, A. N., Chemist in food industry. *Souvenir. Instn. Chem. India* 94-96, 1952.

2903. NATARAJAN, C. P. & BHATIA, D. S., Progress in Food Technology—1951. *J. sci. industr. Res.* **11A** (12) 549-550, 1952.

2904. SUBRAHMANYAN, V., Biological chemists and food industries (Presidential address). *Proc. Soc. biol. Chem. (India)* **10**, 7-13, 1952.

2905. CHACRAVARTI, A. S., PRASAD, KAMTA & KHANNA, K. L., Role of clarifying agents in open-pot boiling of sugarcane juice. *J. sci. industr. Res.* **11B** (7) 305-307, 1952.

2906. DOSS, K. S. G. & SARASWAT, H. C., Surface films of invertase. *Proc. Indian Acad. Sci. (A)* **36** (5) 343-354, 1952.

2907. FAROOQUE, M. & SHRIVASTAVA, DURGA PRASAD, Effect of tannins on colour of Gur. *J. sci. industr. Res.* **11B** (12) 538-540, 1952.

2908. GOSWAMI, PRASANNA CH., Sugar industry in India and abroad. *J. Biol. Soc. Assam* **1** (2) 46-63, 1952.

2909. GUNDU RAO, S. N., Sugar industry wastes—their utilisation. *Chem. Age Ser.* **6**, 68-73, 1952.

2910. LEWIS, Y. S. & JOHAR, D. S., Iron content of Indian commercial sugar and its influence on the citric acid production by *Aspergillus niger* (Lett.) *Cur. Sci.* **21** (11) 311, 1952.

2911. MAZUMDAR, A. L., New process of clarification by middle—juice sulphitation. *Indian Sug.* **2** (8) 301, 1952.

2912. MUKHERJI, B. K., Modified molasses Pt. III. *J. Indian chem. Soc. (Industr. & News Ed)* **15** (3) 167-170, 1952.

2913. SAHA, J. M., Origin and development of the sugar industry in India. *Souvenir. Instn. Chem. India*, 170-175, 1952.

2914. SAHA, J. M. & JAIN, N. S., White sugar without sulphur. *Indian Sug.* **2** (7) 253-258, 1952.

2915. SAHA, J. M., VARMA, N. C. & CHANDRA, GYAN, Technical progress of the white sugar industry of India during the last two decades. *Indian Sug.* **2** (8) 295-301, 1952.

2916. SANJIVA RAO, B., VASUDEVA MURTHY, A. R. & SUBRAHMANYA, R. S., The amylose and the amylopectin contents of rice and their influence on the cooking quality of the cereal. *Proc. Indian Acad. Sci. (B)* **36** (2) 70-80, 1952.

2917. SARASWAT, H. C., Aging of surfaces of invertase solutions. *Proc. Indian Acad. Sci. (A)* **36** (5) 381-387, 1952.

2918. SWAMINATHAN, M., KRISHNA, B. H. & RAMA RAO, G., A plan for Tapioca "Soji" factory. *Bull. Cent. food techn. Res. Inst. Mysore* **2** (3) 79-81, 1952.

2919. UPPAL, I. S., Starch from Indian horse chestnut and its chemical examination. *J. Indian chem. Soc. (Industr. & News Ed)* **15** (3) 178-180, 1952.

664.3 EDIBLE FATS AND OILS

2920. BHATIA, IQBAL SINGH, Effect of cooking upon the vitamin A content of ghee. *Bull. cent. food. Techn. Res. Inst. Mysore* **2** (3) 72-74, 1952.

2921. BHIDE, P. T. & KANE, J. G., Critical temperatures of dissolution of ghee and hydrogenated oils. *Indian J. Dairy Sci.* **5** (4) 183-188, 1952.

2922. GULATI, K. C. & KARTHA, A. R. S., Indicator substances for the detection of hydrogenated oil when used as adulterant of clarified butter fat (Lett). *J. sci. industr. Res.* **11B** (8) 346-347, 1952.

2923. PUNTAMBEKAR, S. V. & RAMACHANDRA, RAO, P., Chlorophyll of colouration of Vanaspati. *Indian Forestr.* **78** (12) 635-637, 1952.

2924. SETHI, S. C. & AGGARWAL, J. S., Stabilization of edible fats by spices and condiments Pt. 1. *J. sci. industr. Res.* **11B** (11) 468-470, 1952.

664.7 FLOUR MILLING

2925. SREENIVASAN, A., Nutritional aspects of cereal milling. *J. sci. industr. Res.* **11 A** (7) 279-300, 1952.

664.8/.9 PRESERVATION OF ORGANIC SUBSTANCES

2926. BAINS, G. S., REDDY, S. K. (Miss), BHATIA, D. S. & SUBRAHMANYAN, V., Investigations on the utilization of tapioca flour for *chapatis pooris* and vermicelli. *Bull. cent. food techn. Res. Inst. Mysore* **2** (2) 38-42, 1952.

2927. BOSE, A. N. & AYAN DUTT, J. M., Studies in heat transmission through rice during heat-treatment for preservation by canning. *Trans. Indian Inst. Chem. Engrs.* IV, 116-123, 1950-51.

2928. JAIN, N. L., DAS, D. P. & LAL, GIRDHARI, Utilization of waste lime pulp. *Indian Food Pack.* **6** (8) 23-26, 1952.

2929. JOHAR, D. S. & ANAND, J. C., Nature and prevention of spoilage in *amla* preservatives. *Indian Food Pack.* **6** (11) 9-11, 1952.

2930. KAPUR, N. S., KIRPAL SINGH, K. & MATHUR, P. B., Preservation of cole crops. *J. sci. industr. Res.* **11A** (8) 368-369, 1952.

2931. KAPUR, N. S., MATHUR, P. B. & KIRPAL SINGH, K., Accumulation of sugars in potatoes in cold storage. (Note), *Bull. cent. food techn. Res. Inst. Mysore* **2** (2), 42-43, 1952.

2932. KAPUR, N. S., MATHUR, P. B. & KIRPAL SINGH, K., Cold storage studies on certain potato varieties. *J. Indian Soc. Refrig. Engrs.* **3** (2) 31-39, 1952.

2933. KAPUR, N. S., MATHUR, P. B. & KIRPAL SINGH, K., Cold storage of seed potatoes. *Indian J. Hort.* 9 (4) 30-38, 1952.

2934. KAPUR, N. S., MATHUR, P. B. & KIRPAL SINGH, K., A new method of curing potatoes preparatory to cold storage. *J. Indian Soc. Refrig. Engrs.* 3 (2) 25-30, 1952.

2935. KAPUR, N. S., PRASAD, M. & MATHUR, P. B., Processing and storage of cashew nuts and kernels. *Indian Food Pack.* 6 (8) 27-30, 1952.

2936. KIRPAL SINGH, K., KAPUR, N. S. & MATHUR, P. B., Studies in the cold storage of cauliflowers. *J. Indian Soc. Refrig. Engrs.* 3 (2) 17-24, 1952.

2937. KIRPAL SINGH, K., KAPUR, N. S. & MATHUR, P. B., Cold storage of brinjals. *Indian J. Hort.* 9 (3) 16-19, 1952.

2938. KIRPAL SINGH, K. & MATHUR, P. B., Ripening of mangoes at controlled temperatures. *Bull. cent. food techn. Res. Inst. Mysore* 2 (1) 14-15, 1952.

2939. LAL, GIRDHARI, TANDON, G. L. & PRUTHI, J. S., Pilot plant trials on the processing of canned mangoes and mango squash. *Chem. Age Ser* 6, 103-110, 1952.

2940. LAL, GIRDHARI, TANDON, G. L. & PRUTHI, J. S., Utilisation of tender bamboo shoots as an article of food. *Chem. Age Ser* 6, 110-114, 1952.

2941. MATHUR, P. B., KIRPAL SINGH, K., & KAPUR, N. S., Losses in weight, sprouting and changes in sugar content in potato tubers stored at various temperatures. *J. Indian Soc. Refrig. Engrs.* 3 (2) 40-49, 1952.

2942. MATHUR, P. B., KIRPAL SINGH, K., & KAPUR, N. S., Refrigerated preservation of mangoes. *Indian Food Pack.* 6 (9) 15-18, 1952.

2943. RAMANAYYA, S. V., MANOHARA RAO, P. J. & RAJU, K. V., A new preservative for sugarcane juices. (Lett). *Cur Sci.* 21 (10) 279-280, 1952.

2944. SIDDAPPA, G. S., BHATIA, B. S. & GIRDHARI-LAL., Canning of baked beans and some Indian pulses in tomato sauce. *Bull. cent. food techn. Res. Inst. Mysore* 2 (1) 10-13, 1952.

2945. SIDDAPPA, G. S. & BHATIA, BALDEV SINGH, Preparation of jelly from jack fruit rind. *Bull. cent. food techn. Res. Inst. Mysore* 2 (3) 70-72, 1952.

2946. SINGH, JAGDIAL., Preparation of jam from mulberry. *Punjab Farm.* 4 (3), 275-278, 1952.

2947. SUBRAMANYAN, V., Synthetic rice (lecture). *Bull. cent. food techn. Res. Inst. Mysore* 2 (2), 48-53, 1952i

2948. TANDON, G. L., Manufacture of jams. *Indian Food Pack.* 6 (7) 7-11, 1952. 6(8) 9-13, 1952.

2949. Food and population and development of food industries in India. (Central Food Tech. Res. Inst., Mysore), 1952. Pp XV + 357. Rs. 5/8/-.

665 OILS. FATS. WAXES

665.1 OILS AND FATS AND THEIR DERIVATIVES IN GENERAL

FATTY ACIDS

2950. KARTHA, A. R. S., Studies on natural fats : Pt V, Melting and solidifying points of mixtures of fully saturated and unsaturated glycerides and of saturated and unsaturated fatty acids. *J. sci. industr. Res.* 18A (8) 354-358, 1952.

2951. KHAN, AMANULLA, Manurial aspect of oil-cakes. *Oils & Oilseeds J.* 5 (3) 6-8, 1952.

2952. MEHTA, T. N., RAO, C. V. N., LINGAM, D. N., SHAH, S. N. & PRABHU, G. S., Urea-adducts of fatty acids. Pt. I. Sesame and linseed oil fatty acids. *J. Indian chem. Soc. (Industr. & News Ed.)* 15 (3) 97-110, 1952.

2953. MEHTA, T. N., RAO, C. V. N. & RAO, B. Y., Sulphation of fatty acids Pt. I. Effect of concentration and molar ratio of sulphuric acid on oleic acid. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3), 111-117, 1952.

2954. PRAKASH, OM, SHARMA, T. R. & KHAN, AMANULLA, A study of the various types of oil cakes produced in Uttar Pradesh. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr) 23, 1952.

2955. RAGHUNATHA RAO, Y. K., Pilot plant for solvent extraction of oilcakes. *J. sci. industr. Res.* **11A** (9), 414-415, 1952.

665.3 VEGETABLE OILS, FATS AND WAXES

2956. ACHARYE, K. T. & SALETORE, S. A., Triricinolein and ricinoleic acid from castor oil. *J. sci. Industr. Res.* **11B** (11) 471-474, 1952.

2957. ANTIA, K. M., Vegetable oils and soap. *Souvenir Instn. Chem. India*, 188-191, 1952.

2958. CHATTERJI, N. G., The economic aspects of the solvent extraction process in the national planning of the Indian oil industry. *Chem. Age Ser. 6* : 148-150, 1952.

2959. CHAUHAN, DHYAN SINGH, Vegetable oil industry in ancient India. *Oils & Oilseeds J.* **5** (6) 6-8, 1952.

2960. GUPTA, S. S. & AGGARWAL, J. S., Hydrogenation of castor oil. *J. sci. industr. Res.* **11B** (7) 303-304, 1952.

2961. CHOPRA, G. M., CHATTERJEE, B. G., SEHGAL, R. G., BOSE, A. C., & GULATI, K. C., Determination of oil in oil seeds (Rapid method). *Indian J. agric. Res.* **22** (Pt. II), 183-188, 1952.

2962. HUSAIN, S. M. & SALETORE, S. A., The effect of metals on vegetable oils. *Indian Soap J.* **18** (6) 192-195, 1952.

2963. MURTI, K. S., The future of cotton seed oil milling and its utilization in India. *Oils & Oilseeds J.* **5** (1) 11-16, 1952.

2964. PRAKASH, OM, SHARMA, T. R. & KHAN, AMANULLA, Technical uses of argemone oil. *Proc. 39th Indian Sci. Congr. Pt. IV* (abstr) 23, 1952.

2965. ROY, B. R., Colour reaction and antioxidant value of sesame oil towards carotene in Vanaspati. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 171-174, 1952.

2966. SEN, N. K. & CHAKRAVARTI, J. K., Utilisation of jute seeds with particular reference to the seed fat. *Indian Soap J.* **18** (5) 164-168, 1952.

2967. SINGH, SHIV DHYAN, Importance of our vegetable oil industry. *Oils & Oilseeds J.* **5** (4) 7, 1952.

2968. SUBBA RAO, T. V., Utilisation of oil cakes, seed hulls and other co-products of vegetable oils and oilseeds. *Indian Soap J.* **18** (3) 90-100, 1952. **18** (4) 134-148, 1952.

2969. VERMA, J. P., Utilisation of oil refinery refuse. *Indian Soap J.* **18** (2) 55-57, 1952.

665.45 MINERAL OILS

2970. SEN GUPTA, N. S., Petroleum its prospecting extraction and refining. *Souvenir Instn. Chem. India* 145-159, 1952.

666 GLASS AND CERAMIC INDUSTRY.

CONCRETE

cf. also 860, 867

2971. ATMA, RAM, Thoughts on the future of crockery and domestic glass-ware in India. *Trans. Indian Ceram. Soc.* **11** (3) 107-117, 1952.

2972. BAKER, H. W., Modern trends in safety glass. *Indian & East Engrs.* **CXI** (6) 929-934, 1952.

2973. HATTIANGADI, R. R., The chemical engineer and the Porthand cement industry. (Presidential address). *Trans. Indian Inst. chem. Engrs.* **IV**, 3-13, 1950-51.

2974. HATTIANGADI, R. R., Cement industry in India. *Souvenir Instn. Chem. (India)* 48-54, 1952.

2975. DESAI, K. N., How price affects the quality of glass. *Indian Pharm.* **7** (10) 465-466, 1952.

2976. KUMAR, S. & SHARMA, K. D., Some aspects of the European container glass industry. *Indian Pharm.* **7** (10) 458-464, 1952.

2977. MAITRA, N., Problem of ink containers in India. *Indian Pharm.* **7** (10) 471-473, 1952.

2978. MOHANTY, G. N. & ORS, Dental porcelain. *Trans. Indian Ceram Soc.* **11** (3) 134-167, 1952.

2979. NIVOGY, S. C., Limit of alkalinity of neutral glass (Lett). *Sci. & Cult.* **18** (2) 90-91, 1952.

2980. RAM, ATMA, Glass industry in India—a brief survey. *Souvenir Instn. chem. (India)*, 103-112, 1952.

2981. RAM, ATMA, BANERJEE, J. C., Roy, S. B. & VARSHNEY, Y. P., Studies on Indian tales: Pt. II—Firing characteristics and fired properties. *J. sci. industr. Res.* **11A** (9) 398-402, 1952.

2982. RAM, ATMA, KRISHNASWAMI, S. P., Roy, P. & VARSHNEY, Y. P., Glass containers suitable for fluid writing inks. *J. sci. industr. Res.* **11A** (12) 538-541, 1952.

2983. SASTRY, B. S. K., Utilisation of boiler waste ash and clinker lime bricks. *Chem. Age Ser.* **6** : 124, 1952.

2984. SRINIVASAN, N. R., A statistical note on the Indian glass industry. *Indian Pharm.* **7** (10) 474-477, 1952.

2985. Quality Concrete. Pp. 218. 172 illustr and diagrams. 42 tables Rs. 7-8-0. Publ : Concrete Association of India, 1, Queens Road, Bombay.

667 DYEING AND BLEACHING INDUSTRIES

667.6, 8 PAINTS, VARNISHES, LACQUERS

2986. DAS GUPTA, R. C., Role of chemistry and the contribution of chemists in the development of the Indian paint industry. *Souvenir Instn. Chem. India*, 136-144, 1952.

2987. GOPAL SHARMB, P. & AGARWAL, J. S., Air-dry wrinkling coating compositions. *J. sci. industr. Res.* **11A** (7) 308-310, 1952.

2988. HALLSWORTH, S., Vitreous enamelling. *Indian & East. Engr.* **CXI** (3) 433-438, 1952.

2989. INDIAN LAC RESEARCH INSTITUTE, NAMKUM, BIHAR, Annual Report for the financial year 1950-51. Ranchi 1952. Pp 43.

2990. SARIN, K. K. & KAPUR, S. L., Urea-formaldehyde coating compositions. *J. sci. industr. Res.* **11B** (11) 474-477, 1952.

2991. SEN GUPTA, SAILESH CHANDRA & BOSE, PRAFULLA KUMAR, Constituents of shellac: Pt I—Butolic acid. *J. sci. industr. Res.* **11B** (11) 458-461, 1952.

2992. VENUGOPALAN, MUDAMBI, & BOSE, PRAFULLA KUMAR, The use of shellac in coating earthenware. *J. sci. industr. Res.* **11A** (10) 463-463, 1952.

668.1 SOAP INDUSTRY

2993. B. K. M., Additives in soap. *Indian Soap J.* **18** (3) 101-104, 1952.

2994. CHATTERJI, N. G., Soap in industry. *Indian Soap J.* **18** (4) 121-124, 1252.

2995. DOSS, K. S. G., Some physico-chemical aspects of detergents. *Indian Soap J.* **18** (1) 12-16, 1952.

2996. GANAPATHY, N. V., Superfattening of toilet soaps. *Soap* **5** (10) 3-4, 1252.

668.2 GLYCERIN AND ITS DERIVATIVES

2997. SUBBA RAO, T. V., DESIKACHAR, N., LALKAKA, K. E., & VARMA, K. R., Utilisation of filter press cake and glycerine foots obtained in the manufacture of glycerine from spent lye. *Indian Soap J.* **18** (2) 58-63, 1952.

668.3 ADHESIVES, GLUE AND GELATIN BONE PROCESSING

2998. JAGARAO, A., Utilisation of keratinous with special reference to horn and hoof waste. *Chem. Age Ser* 6, 121-123, 1952.

668.4 GUMS AND RESINS

2999. SETH, G. K. & BHASKARAN, T. R., Utilisation and disposal of lac wastes. *Chem. Age Ser* 6, 125-126, 1952.

668.5 ESSENTIAL OILS, PERFUMERY, COSMETICS

cf. also 1597

3000. AMARYLLIS, Possibilities of manufacture of synthetic perfume concentrates in India. *Indian Soap J.* **18** (1) 25-28, 1952.

3001. DHINGRA, D. R., GUPTA, G. N. & CHANDRA, GANESH, The Indian Vetiver oil industry with special reference to Uttar Pradesh. *Indian Soap J.* **18** (3) 77-89, 1952.

3002. EDITOR, Recent researches on fixed and essential oils in the Universities and research institutions in India. *Indian Soap J.* **18** (1) 29-36, 1952.

3003. MENON, A. K., Indian essential oil industry. *Souvenir. Instn. Chem. (India)* 83-93, 1952.

3004. MUKHERJI, B. K., Essential oil from citrus fruits. *Indian Soap J.* **18** (4) 125-133, 1252.

3005. NAIR, K. N. G. & NAIR, R. G. K., Travancore lemon grass oil. *J. Sci. club* **6** (2) 75-80, 1952.

3006. NAIR, K. N. G., & VARIER, N. S., Oil from Eucalyptus from Travancore. *Indian Soap J.* **18** (1) 17-19, 1952.

3007. NAIR, K. N. G., & VARIER, N. S., Camphor from *Ocimum Kilimandrischaricum* *Indian Soap J.* **18** (2) 53-54, 1952.

3008. NAIR, K. N. G., VARIER, N. S. & NAIR, P. V., Oil of cloves from Travancore. *Indian Soap J.* **18** (5) 161-163, 1952.

3009. RAMAN MOOSAD, C., Economic possibilities of lemongrass oil industry on the West coast. *Madras agric. J.* **39** (12) 616-620, 1952.

3010. RAMAN MOOSAD, C., The Indian Vetiver oil industry and its economic possibilities. *Madras agric. J.* **39** (7) 403-409, 1952.

3011. SASTRY, S. G., Indian (Mysore) Linaloe oil. *Bd. sci. & Industr. Res. Monog. No. 3.* Bangalore, 1952. Govt. of Mysore.

3012. SUBBA RAO, M. N. & NAGESA RAO, N., Patchouli oil. Pts. I & II. *Soap* **5** (11), 11-18, 1952; **5** (12) 3-6, 1952.

3013. VERMA, B. S., A new condenser for camphor distillation. *Indian For.* **78** (9) 471-474, 1952.

668.7 TAR DISTILLATION. PYROLIGNEOUS PRODUCTS

3014. BHASKARAN NAIR, C. S., Composition and utilization of wood for formed in the producer gas plants of Messrs. The fertilisers and chemicals, Travancore, Ltd. Alwaye. *Chem. Age Ser 6*, 57-60, 1952.

3015. BHATT, M. V. & GUHA, P. C., Chemical constituents of Anthracene oil. *Sci. & Cult.* **18** (1) 12-18, 1952.

3016. SIRCAR, S. K., Coal and coal tar products. *Souvenir Instn. Chem. (India)* 64-69, 1952.

668.8 ARTIFICIAL ORGANIC DYESTUFFS

3017. DESAI, R. D. & KUMTA, N. S., Studies in Vat dyes: Pt. II—Some phenanthrenequinonyl—anthraquinonylimines and their dyeing properties. *J. sci. industr. Res.* **11B** (7) 284-286, 1952.

3018. DESAI, R. D. & KUMTA, N. S., Studies in Vat dyes: Pt. I—The acyl and aroyl derivatives of 2—Aminophenanthraquinone. *J. sci. industr. Res.* **11B** (7) 282-284, 1952.

669 METALLURGY

cf. also 868

3019. ANANT, P., Acid steel making in India. *Proc. 39th Indian Sci. Congr.* Pt. IV, 139-152, 1952.

3020. ARAVAMUTHAN, V., Hydrogen reduction of ores. *Met. mark. Rev.* **5** (27) 34-40, 1952.

3021. BHATNAGAR, S. S. & NIJHAWAN, B. R., Abnormal structures in steel. *Met. mark. Rev.* **5** (36) 13-16, 1952.

3022. CHAKRABARTY, N. G. & VASWANI, A. T., Shell molding. *Met. mark. Rev.* **5** (37) 15-16, 1952.

3023. CHATTEBJEA, A. B. & NIJHAWAN, B. R., Effect of austenitic grain size on nickle-chromium steels. *J. sci. industr. Res.* **11B** (9) 389-391, 1952.

3024. CHATTERJEE, D. P., Properties and uses of carbon and alloy tool steels commonly used in industries. *Quart. J. geol. min. & metall. soc. India* **24** (1-4) 173-187, 1952.

3025. CONTRACTOR, G. P., & SRIKANTIAH, B. S., Coinage metals. *Quart. J. geol. min. & metall. Soc. India* **24** (1-4) 61-64, 1952.

3026. DUTTA, R. K., & BANERJEE, T., Recovery of nickel and zinc from silver refinery waste liquor: Pt. II—chemical methods. *J. sci. industr. Res.* **11B** (8) 342-343, 1952.

3027. KAPOOR, A. N. & NIJHAWAN, B. R., Ductile Titanium—a prospective metal in Indian industry. *Met. mark. Rev.* **5** (43) 19-22, 1952, **5** (44) 15-21, 1952.

3028. KREBS, W. E., Use of oxygen in the production and processing of iron and steel. *J. sci. industr. Res.* **11A** (11) 490-496, 1952.

3029. KRISHNAN, A. A., Permanent magnets and permanent magnetic research. *Met. mark. Rev.* **5** (38) 17-21, 1952. **5** (39) 17-19, 1952. **5** (40) 13-15, 1952.

3030. MCNEIL, J., Spheroidal graphite cast iron. Some properties and applications. *Met. Mark. Rev.* **5** (27) 41-49, 1952.

3031. NARAYANAN, P. I. & MATHUR, G. P., Separation of cryolite from carbon dust from aluminium reduction furnaces. *J. sci. industr. Res.* **11A** (7) 310-312, 1952.

3032. MECHACKEN, J. & DOSHI, M. S., Iron and steel industry in India. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr) 68-83, 1952.

3033. MITTER, G. C., Role of assay office in the Indian mints. *J. Sci. Club.* **6** (2) 72-75, 1952.

3034. MITTER, G. C., Aluminium and its alloys in coinage. *Sci. & Cult.* **18** (4) 157-160, 1952.

3035. PARTHASARATHI, M. N. & NIJHAWAN, B. R., The preparation of single crystals of metals. *Met. mark. Rev.* **5** (30) 9-12, 1952. **5** (31) 9-16, 1952.

3036. RAMACHANDRAN, G. N., Application of X-Rays to metallurgy. *Met. mark. Rev.* **5** (32) 7-11, 1952.

3037. RAMAMURTHY, S., A note on some new reactions for refining titanium. (Lett). *J. sci. industr. Res.* **11B** (12) 545-546, 1952.

3038. ROY, GAUTAMSHANKER, The lost wax process of casting metals in Mayurbhanj. *Man in India* **32** (4) 198-206, 1952.

3039. SCHWARZ, A., Copper bearing scrap refined to electrolytic copper. *Met. mark. Rev.* **5** (33) 13-16, 1952.

3040. SEN, N., Chemistry in metallurgy. *Souvenir Instn. Chem. India*. 112-115, 1952.

3041. SRIRAMA RAO, M. & APPAVADHANULU, K., Old copper workings of Agnigundala, Guntur district. *Quart. J. geol. min. & metall. soc. India*. **24** (1-4) 75-82, 1952.

3042. SUBRAMANYAM, G. V. & NARAYANAN, P. I. A., Flotation of sulphur from sulphur-bearing clays from near Masulipatam, Madras. *J. sci. industr. Res.* **11B** (10) 423-526, 1952.

3043. TALWAR, V. D., American iron and steel industry. *Met. mark. Rev.* **5** (25) 11-15, 1952. **5** (26) 13-14, 1952. **5** (37) 17-22, 1952.

3044. TENDOLKAR, G. S., Metal powder sintered bearings (self lubricating) (Lett). *J. sci. industr. Res.* **11B** (11) 505-506, 1952.

3045. VAIDYANATHAN, K. S., Some practical aspects of high speed steel manufacture. *Met. mark. Rev.* **5** (34) 11-15, 1952. **5** (35) 11-13, 1952.

3046. VAILL, R., KOCHHAR, H. L. BILLIMORIA, L. M. O. & KHAN, M., Effects of different limestones on basic open hearth production. *Proc. 39th Indian Sci. Congr. Pt. IV*, 152-155, 1952.

3047. VISWANATHAN, S., Sorting of a mix-up in a steel plant. *Met. mark. Rev.* **5** (22) 15-18, 1952. **5** (23) 15-18, 1952.

MANUFACTURE AND PROCESSING OF SIMPLE MATERIALS

674 WOOD INDUSTRY

3048. PRASAD, J., Utilisation of timber cores in the plywood industry in India. *Chem. Age Ser.* 6, 127, 1952.

3049. PURUSHOTAM, A., PANDE, J. N. & JADHAVE, Y. G., Wood preservation in India. *Indian Forestr.* **78** (12) 627-634, 1952.

3050. TEWARI, M. C., PANDE, J. N. & PURUSHOTAM, A., Testing of wood preservatives. Pt. I. Copper chrome-boric composition. *Indian Forestr.* **78** (9) 442-453, 1952.

675 LEATHER INDUSTRY

3051. BANERJEE, M., Sperm oil substitutes for Indian pickers. *Tanner* **7** (5) 30, 1952. **7** (6) 21, 1952.

3052. DAS, B. M., Leather research. *Tanner* **7** (2) 13-16, 1952.

3053. DAS, B. M., Research for the Indian leather industry. *J. sci. industr. Res.* **11A** (8) 357-368, 1952.

3054. DE, J. K., An investigation on bleaching of vegetable tanned light leathers. *Tanner* **7** (7) 15-18, 1952.

3055. PANIKER DE PELACH, MERCEDES (Mrs.), Theoretical consideration in tanning. *Tanner* 7 (4) 18-19, 1952.

3056. SARKAR, P. K., An investigation into the indigenous tanning materials of India. *Tanner* 7 (3) 15-17, 1952; 7 (4) 15-17, 1952; 7 (5) 15-18, 1952.

3057. WOODROFFE, D., Tanning of Indian sheepskins and goatskins. *Tanner* 7 (6) 15-18, 1952.

676 PAPER AND CARDBOARD INDUSTRY

3058. ATCHISON, JOSEPH E., Straw pulping developments in the Netherlands. *Indian Pulp & Pap.* 7 (1) 36-43, 1952.

3059. BHARGAVA, M. P., Pulp production in India a commentary. *Indian Pulp & Pap.* 7 (1) 32-34, 1952.

3060. BHAT, R. V., GUHA, S. R. D. & PANDA, S. P., Writing and printing papers from *Boswellia serrata*. *Indian Pulp & Pap.* 7 (3) 179-183, 1952.

3061. BHAT, R. V. & KARNIK, M. G., Indigenous cellulosic raw materials for the production of pulp, paper and board. Pt. XI. Chemical pulps from *Andropogon contortus* Linn. (Kusal grass). *Indian Forestr.* 78 (7) 331-338, 1952.

3062. BHAT, R. V. & SINGH, MAN MOHAN, Pulps for strawboards from *Ulla* grass. *Indian Pulp & Pap.* 7 (5) 267-272, 1952.

3063. BHATNAGAR, M. S. & SAHAI, S. N., Paper laminated boards. *Indian Pulp & Pap.* 7 (5) 265-266, 1952.

3064. CHATURVEDI, M. D., Manufacture of newsprint in India. *Indian Pulp & Pap.* 7 (1) 83-87, 1952.

3065. DHINGRA, D. R., BHATNAGAR, M. S. & NIGAM, P. C., Lignin recovery from soda black liquor. *Indian Pulp & Pap.* 7 (6) 311-315, 1952.

3066. GONDHALEKAR, G. H., Utilisation of agricultural wastes for paper manufacture. *Poona agric. coll. mag.* 43 (1) 15-18, 1952.

3067. GONDHALEKAR, G. H., Hand made paper industry. *Indian Pulp & Pap.* 7 (3) 185-191, 1952.

3068. GUHA, S. R. D., Paper mill effluents. *Indian Pulp & Pap.* 7 (1) 53-55, 1952.

3069. KOTHARI, P. S., Bamboo paper and the market. *Indian Pulp & Pap.* 7 (1) 97-103, 1952.

3070. LAL, AMRIT, Quality of water for pulp and paper manufacture. *Indian Pulp & Pap.* 7 (1) 105-108, 1952.

3071. LATHROP, E. C., Newsprint manufacture from straw and bagasse pulps. *Indian Pulp & Pap.* 7 (1) 57-59, 1952.

3072. JAEGER, OTTO, Rubber rolls in pulp and paper manufacture. *Indian Pulp & Pap.* 7 (1) 69-79, 1952.

3073. NUKI, R. P., Paper drying and forced steam circulation. *Indian Pulp & Pap.* 7 (2) 129-134, 1952.

3074. SESHADBI IYENGAR, N. K., Paper made from the flosses of *Cryptostegia grandiflora*. *Indian Pulp & Pap.* 7 (1) 81-82, 1952.

3075. TAPADAR, D. C., Paper technology. *Souvenir Instn. Chem. (India)* 116-123, 1952.

3076. VENKAJEE, T., Development of paper industry in Assam. *J. biol. Soc. Assam* 1 (2) 38-45, 1952,

3077. WALTER, LEO, Improve your steam piping. *Indian Pulp. & Pap.* 7 (1) 45-51, 1952.

3078. WALTER, LEO, Aspects of instrumentation. *Indian Pulp & Pap.* 7 (6) 303-308, 1952.

3079. A review of the Indian pulp and paper industry. (editorial). *Indian Pulp & Pap.* 7 (1) 17-23, 1952.

677 TEXTILE INDUSTRY

3080. ALI, LATIF, Shedding and beating in a vertical loom—an experiment. *Indian Tex. J.* 63 (747) 179-180, 1952.

3081. CONTRACTOR, H. N., Progress of the shuttle industry in India. *Indian Tex. J.* 63 (747) 177-178, 1952.

3082. DAS, D. B., GUHA, S. K., WAREHAM, J. F., A new method for the assessment of bast fibre quality by torsional rupture. (Lett.) *J. sci. industr. Res.* 11B (10) 449-451, 1952.

3083. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3096) on samples of C. P. No. 1 cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* No. 854, 3, 1952.

3084. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3097) on samples of Gaorani 6 cotton, 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 855, 3, 1952.

3085. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3098) on samples of Jarila (Berar) cotton 1951. *Indian centr. cott. comm. Techn. Lab. Circ.* 856, 3, 1952.

3086. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3099) on a sample of H. 420 cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 857, 2, 1952.

3087. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3100) on samples of Jarila (East Khandesh) cotton, 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 858, 3, 1952.

3088. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3101) on samples of Jarila (West Khandesh) cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 859, 3, 1952.

3089. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3102) on samples of Vijay cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 860, 3, 1952.

3090. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3103) on samples of Navasari cotton, 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 861, 3, 1952.

3091. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3108) on samples of Malvi cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 862, 3, 1952.

3092. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3126) on samples of Suyog (Seg 8-1) cotton, 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 863, 3, 1952.

3093. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3127) on samples of Westerns (Anantapur) cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 864, 3, 1952.

3094. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3128) on samples of Farm Westerns (Bellary) cotton, 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 865, 3, 1952.

3095. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3142) on samples of Jayawant (Bijapur) 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 866, 2, 1952.

3096. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3143) on samples of Jayawant (Bagalkote) cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 867, 3, 1952.

3097. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3144) on samples of Jayawant (Bailhangal) cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 868, 3, 1952.

3098. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3150) on samples of Wagad (Gujarat) cotton, 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 869, 3, 1952.

3099. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3151) on samples of Cambodia Co 3 (Salem) cotton 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* 870, 3, 1952.

3100. INDIAN CENTRAL COTTON COMMITTEE, BOMBAY, Spinning test report (No. 3153) on samples of Karunganni (Sattur) cotton 1951-52. 871, 3, 1952. *Indian centr. cott. comm. Techn. Lab. circ.* 856, 3, 1952.

3101. INDIAN CENTRAL COTTON COMMITTEE, Spinning test report (No. 3154) on a sample of L. S. S. 1951-52. *Indian centr. cott. comm. Techn. Lab. Circ.* No. 872, 2, 1952.

3102. MACMILLAN, W. G., CHAKRAVERTI, I. B. & PAL, P. N., Studies on tamarind kernel powder: Pt. III.—Comparative potency of antiseptics uses in jute sizing mixtures. *J. sci. industr. Res.* **11B** (10) 438-446, 1952.

3103. NANJUNDAYYA, C., Study of yarn characteristics with special reference to the region of yarn rupture. *Proc. 39th Indian Sci. Congr.* Pt. IV (abstr.) 2, 1952.

3104. NANJUNDAYYA, C., Variation in weight per unit length along the length of a cotton fibre and its effect on the determination of other fibre properties. *Indian cott. grow. Rev.* **6** (4) 171-183, 1952.

3105. NANJUNDAYYA, C., Effects of twist on yarn strength with special reference to the estimation of the latter at different twist multipliers. *Indian Tex. J.* **62** (743) 681-688, 1952.

3106. NANJUNDAYYA, C., Technological reports on trade varieties of Indian cottons 1952. *Techn. Bull.* Ser. A, No. 81, 1-94, 1952. Rs. 2/-.

3107. PARIKH, JAYANTKUMAR G., The Indian Rayon weaving industry. *Indian Tex. J.* **63** (747) 175-176, 1952.

3108. RAMANATHAN, N., Study of the irregularity of the products of cotton spinning. *Indian Tex. J.* **62** (744) 734-737, 1952.

3109. SAMPAT, DILIP V., Card grinding. *Indian Tex. J.* **62** (744) 745-748, 1952.

3110. SEN GUPTA, R., Yarn preparation Vol. I. Publ: Popular Book Depot, Lamington Road, Bombay. Rs. 10/8/-.

3111. SRINAGABHUSHANA, Effect of processing preparatory to spinning on the fibre properties of cotton. *Indian cott. grow. Rev.* **6** (3) 131-146, 1952.

3112. WILLIAMS, A. E., Production of carding machines. *Indian & East. Engr.* **CXI** (5) 771-774, 1952.

677.1/5 KINDS OF FIBRES AND PRODUCTS

3113. BHAT, G. N., Studies on the scouring temperature of wool wax. *Indian Tex. J.* **62** (744) 750-752, 1952.

3114. DARUVALLA, D. N. & KAMATH, V. G., Utilization of sugar industry waste: Mineral wool from filter press mud. *J. sci. industr. Res.* **11A** (9) 412-413, 1952.

3115. DAS, D. B., MITRA, M. K. & WAREHAM, J. F., Fibre from *Canna Orientalis* as a jute substitute. *J. sci. industr. Res.* **11B** (12) 541-543, 1952.

3116. SESHADRI AIYANGAR, G., Origin and development of lint and fuzz in cotton. *Indian J. agric. Sci.* **21** (Pt. IV) 293-312, 1952.

677.6/7 TEXTILE PRODUCTS

3117. DESAI, B. R., Viscon rayon manufacture—I. Methods employed and principles involved. *Indian Tex. J.* **62** (744) 720-724, 1952.

3118. GOSWAMI, M., Moisture and size determination of cloth work in West Bengal. *Indian Tex. J.* **63** (745) 41, 1952.

3119. PRAYAG, R. S., Khaki. *Indian Tex. J.* **62** (743) 667-669, 1952.

3120. RAMASWAMI, A., Korai mat weaving industry and Rattan industry at Coleroon. *J. Annamalai Univ.* **16**, 115-134, 1951.

678 RUBBER INDUSTRY

3121. DESHPANDE, D. D., Utilization of rubber waste. *Chem. Age Ser.* 6, 128, 1952,

3122. GOOD, W. R., The use and abuse of tyres. *Indian & East. Engr.* (Transp. Suppl.) **CXI** (2) 271-283, 1952.

3123. RAMAIYER, G. S., SIVARAMAKRISHNAN, N. H. & RAO, M. R. A., Chlorination of rubber latex-carbon tetrachloride emulsions in packed columns. *J. sci. industr. Res.* **11B** (8) 333-335, 1952.

3124. RAMAIYER, G. S. & RAO, M. R. A., Viscosity of rubber-latex-carbon tetrachloride emulsions. *J. sci. industr. Res.* **11B** (8) 335-337, 1952.

3125. RISDON, E. J., Determination of the dry rubber content of natural rubber latex. Pt. II. The effect of ammoniation and storage on the dry rubber content of field latex. *Combd. 1st & 2nd Quart. Circ. for 1952.* (*Rubb. Res. Inst.*) **28** (Pts. 1-2) 7-14, 1952.

3126. RISDON, E. J., Determination of the dry rubber content of natural rubber latex. Pt. I. Methods for ammoniated latex. *Combd. 1st & 2nd Quart. Circ. for 1952.* (*Rubb. Res. Inst.*) **28** (Pts. 1-2) 3-6, 1952.

3127. SIVARAMAKRISHNAN, N. H., RAMA IYER, G. S., & RAO, M. R. A., Direct chlorination of rubber latex. *J. sci. industr. Res.* **11B** (8) 327-322, 1952.

679 PLASTIC INDUSTRY

3128. DE, J. K., Plastics and their applications in leather industry. *Tanner* **7** (2) 24, 1952.

3129. GUPTA, PRASANTA KUMAR & CHOUDHURY, PIJUSH KANTI. Studies in cellulose nitrate. Pt. I. Preparation of cellulose nitrate from Indian cotton and a study in its degree of polymerisation, nitrogen content and solubility. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 127-130, 1952.

3130. SARKER, SATYABAN & CHOUDHURY, PIJUSH KANTI, Cast phenolic resin. A study in its preparation and properties. *J. Indian chem. Soc. (Industr. & News Ed.)* **15** (3) 131-136, 1952.

3131. SUBBA RAO, T. V., Use of wood waste and agricultural residues in the manufacture of plastics. *Chem. Age Ser.* 6, 129-137, 1952.

681 OPTICAL INSTRUMENTS

3132. RAO, C. S., A note on the manufacture and inspection of optical glass. *Def. Sci. J.* **2** (4) 232-237, 1952.

691 BUILDING

3133. SUBRAHMANYAN K. & MAJUMDAR, N., A study of the effect of different wall and roof materials of buildings on indoor thermal conditions. *J. sci. industr. Res.* **11A** (9) 402-410, 1952.

737 NUMISMATICS

3134. AGRAWALA, V. S., Dr. Sahni's contribution to Indian numismatics. *Palaeobot.* 1, 51-55, 1952.

77 PHOTOGRAPHY

3135. DIXIT, K. R., The processing of nuclear emulsions upto 200 microns. *J. sci. industr. Res.* **11B** (9) 351-355, 1952.

3136. NARAYANAN NAMBIYAR, V. P., Russell effect in Indian timber woods. *Indian Forestr.* **78** (10) 490-496, 1952.

PHOTOGRAPHY

3137-3146

137. NARAYANAN NAMBIYAR, V. P., Russell effect and photographic emulsions. (Lett.) *Cur. Sci.* **21** (7) 182-183, 1952.

3138. NARAYANAN NAMBIYAR, V. P., Application of Russell effect to the identification of the heartwood and sapwood of *Sal.* (Lett.) *Cur. Sci.* **21** (10) 289-290, 1952.

3139. SETH, G. K., Utilization of wastes from the film industry. *Chem. Age Ser.* 6, 89-90, 1952.

3140. TRIVEDI, D. M., The photographic chemicals industry—a review. *Chem. Age Ser.* 6, 75-85, 1952.

91 GEOGRAPHY

3141. MU, DAW KHIN AYE, An urban study of Mandalay town. *M. A. thesis, Univ. Rangoon*, 1952.

3143. SINGH, UJAGIR, Banaras—a note on its urban geography. *Indian geogr. J.* **26** (1 & 2) 26-31, 1952.

3142. SIDDIQI, AKHTAA HUSAIN, A regional survey of the Karachi area. *Indian geogr. J.* **27** (3 & 4) 67-70, 1952.

5/6(09) HISTORY OF PURE AND APPLIED SCIENCES

3144. PADMANABHAN, T. S. A., Dives into ancient Hindu medicine. (Masurika, teachings of Savants of Old Kerala). *Antisep.* **49** (7) 543-556, 1952.

3146. Symposium on the History of Sciences in South Asia. *Proc. nat. Inst. Sci. India* **18** (4) 323-362, 1952.

3145. SRIVASTAVA, G. P., History of Indian Pharmacy. (Contd). Chapter VIII. Early pharmacy. *Indian Pharm.* **7** (12) 581-585, 1952. **8** (1) 28-35, 1952.

